S. HRG. 98-224

MISCELLANEOUS RECLAMATION LEGISLATION

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

ON

S. 268

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN HYDROELECTRIC POWERPLANTS AT VARIOUS EXISTING WATER PROJECTS, AND FOR OTHER PURPOSES

S. 448

A BILL TO AUTHORIZE REHABILITATION OF THE BELLE FOURCHE IRRIGATION PROJECT, AND FOR OTHER PURPOSES

S. 672

A BILL TO AMEND THE RECLAMATION SAFETY OF DAMS ACT OF 1978 TO AUTHORIZE ADDITIONAL APPROPRIATIONS, AND FOR OTHER PURPOSES

S. 739

A BILL TO AMEND THE RECLAMATION SAFETY OF DAMS ACT OF 1978 TO AUTHORIZE ADDITIONAL APPROPRIATIONS, AND FOR OTHER PURPOSES

MARCH 24, 1983

PART 1

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Committee on Energy and Natural Resources

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CONTENTS

Page

S. 268 2
S. 448 9
S. 672 14
S. 739 16

STATEMENTS

Abdnor, Hon. James, a U.S. Senator from the State of South Dakota 30
Broadbent, Hon. Robert N., Commissioner, Bureau of Reclamation, Department of the Interior 73
Daschle, Hon. Thomas A., a U.S. Representative from the State of South Dakota 34
DeConcini, Hon. Dennis, a U.S. Senator from the State of Arizona 23
Donaldson, Robert L., president, board of directors, Belle Fourche Irrigation District, accompanied by Jim Casey, consultant 46
Goldwater, Hon. Barry, a U.S. Senator from the State of Arizona 20
Hecht, Hon. Chic, a U.S. Senator from the State of Nevada 27
McClure, Hon. James A., a U.S. Senator from the State of Idaho 18
Neufeld, Warren R., secretary, Department of Water and Natural Resources, State of South Dakota 38
Nickles, Hon. Don, a U.S. Senator from the State of Oklahoma 1
O'Meara, J. W. "Pat", executive vice president, National Water Resources Association 148
Osann, Edward R., director, water resources program, National Wildlife Federation 131
Pressler, Hon. Larry, a U.S. Senator from the State of South Dakota 28

APPENDIXES

Appendix I

Responses from the Department of the Interior to additional questions 163

Appendix II

Additional material submitted for the record 178

MISCELLANEOUS RECLAMATION LEGISLATION

THURSDAY, MARCH 24, 1983

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room SD-366, Dirksen Office Building, Hon. Don Nickles, presiding.

Present: Senators Nickles, McClure, and Hecht.

Also present: Russell R. Brown, professional staff member; and Craig Gannett, counsel for the minority.

OPENING STATEMENT OF HON. DON NICKLES, A U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator NICKLES. Good morning. I wish to thank and welcome the several people who are going to be witnesses today on a few bills that are left over from the legislative agenda from last year.

We will hear testimony on four different pieces of legislation—on Senate bill 268, introduced by Senator McClure which would authorize the additional hydroelectric generating facilities at different Bureau of Reclamation projects which are located in California, Montana, Idaho, Wyoming, and Nevada; also on Senate bill 448, introduced by Senators Abdnor and Pressler, which would authorize the rehabilitation of the Belle Fourche irrigation project in South Dakota.

Also we will hear statements made on Senate bill 672, introduced by Senator McClure, which would amend the Safety of Dams Act of 1978 and to authorize an additional $550 million for dam safety work and would also amend the act to allow replacement of dams; and finally Senate bill 739, which was introduced by Senator DeConcini, which would also authorize an additional $550 million for safety of dam work, but does not provide authority for replacement of structures.

As you all know, similar or identical bills that are the subject of the hearing today were considered and reported favorably by this committee in the last session of Congress. The hydropower bill and also the Belle Fourche bill passed the Senate. The bill to amend the Safety of Dams Act was not considered by the Senate prior to the adjournment.

[The texts of the bills and prepared statements of Senators McClure, Goldwater, and DeConcini follow:]

II

98TH CONGRESS
1ST SESSION

S. 268

To authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric powerplants at various existing water projects, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JANUARY 27 (legislative day, JANUARY 25), 1983

Mr. MCCLURE introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric powerplants at various existing water projects, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior, acting pursuant to the Federal reclamation laws (Acts of June 17, 1902, 32 Stat. 388 and Acts amendatory thereof and supplemental thereto), is authorized to construct, operate, and maintain hydroelectric powerplants at existing reclamation project facilities at locations and in the approximate capacities set forth in section 4 of this Act: *Provided,* That construction by the Secretary of the Interior of a powerplant designated in subsection (a), (b), (d), (e), or (f) of section 4 of this Act may not proceed prior to October 1, 1985, or if a license has been issued prior to such date to a non-Federal entity pursuant to section 4(e) of the Federal Power Act (16 U.S.C. 797) to construct such powerplant. In carrying out the purposes of this Act, the Secretary of the Interior is authorized to modify the capacity of a powerplant designated in section 4 as determined to be necessary or desirable during postauthorization study and design, and after consultation with the Secretary of Energy.

SEC. 2. The Secretary of Energy is authorized to construct, operate, and maintain transmission facilities as required physically to connect the hydroelectric powerplants authorized in this Act to existing power systems and as he determines necessary to accomplish distribution and marketing of power generated by powerplants constructed pursuant to this Act, and to purchase replacement capacity, energy, or both in order to maintain deliveries to customers during unit outages which result from Federal construction of the powerplants authorized in this Act.

SEC. 3. During Federal construction of powerplants authorized in this Act, the Secretary of the Interior and the Secretary of Energy shall seek to minimize the loss of capacity, energy, or both to power customers due to unit outages which result from such construction. The Secretary of

Energy shall seek to maintain deliveries of capacity, energy, or both at contract prices to customers affected by unit outages resulting from such Federal construction.

SEC. 4. (a) Friant powerplant unit, Central Valley project, California, consisting of—

(1) a turbine generator unit of two thousand seven hundred kilowatts on the river outlet from Friant Dam;

(2) a turbine generator unit of five thousand kilowatts on the outlet to the Madera Canal at Friant Dam; and

(3) a turbine generator unit of fifteen thousand kilowatts on the outlet to the Friant-Kern Canal at Friant Dam.

(b) Whiskeytown powerplant unit, Central Valley project, California, consisting of a turbine generator unit of three thousand kilowatts on the outlet works of Whiskeytown Dam.

(c) Yellowtail Afterbay powerplant unit, Pick-Sloan Missouri Basin program, Montana, consisting of a turbine generator unit of ten thousand kilowatts on the outlet works of Yellowtail Afterbay Dam.

(d) Red Bluff powerplant unit, Central Valley project, California, consisting of four turbine generator units of two thousand five hundred kilowatts each at Red Bluff Diversion Dam.

(e) Stony Gorge powerplant unit, Orland project, California, consisting of a turbine generator unit of three thousand kilowatts on the outlet works of Stony Gorge Dam.

(f) Monticello powerplant unit, Solano project, California, consisting of a turbine generator unit of sixteen thousand kilowatts on the outlet works of Monticello Dam.

(g) Palisades powerplant enlargement, Palisades project, Idaho-Wyoming, consisting of one or more turbine generator units so as to increase the powerplant capacity by ninety thousand kilowatts.

(h) Anderson Ranch powerplant unit, Boise project, Idaho, consisting of a turbine and generator unit to increase the powerplant capacity by thirty thousand kilowatts.

(i) Minidoka powerplant rehabilitation and enlargement, Minidoka project, Idaho-Wyoming, consisting of a turbine generator unit of thirty thousand kilowatts in replacement of existing units one through six.

(j) Boca powerplant unit, Truckee storage project, California-Nevada, consisting of a turbine generator unit of nine hundred kilowatts on the outlet works of Boca Dam.

(k) Prosser powerplant unit, Washoe project, California-Nevada, consisting of a turbine generator unit of one thousand kilowatts on the outlet works of Prosser Dam.

SEC. 5. (a) Hydroelectric power generated by Federal facilities constructed pursuant to this Act shall be delivered to the Secretary of Energy for distribution and marketing through existing Federal hydroelectric power marketing programs in accordance with existing law and policy consistent with the provisions of this Act.

(b) The Federal powerplants authorized in this Act shall be financially integrated with and the power marketed under rate schedules in effect for the several programs as follows:

(1) Friant, Red Bluff, Whiskeytown, Stony Gorge, and Monticello powerplant units shall be marketed through the Central Valley project power marketing program;

(2) Yellowtail Afterbay powerplant unit, and Buffalo Bill Dam powerplant replacement shall be marketed through the Eastern Division, Pick-Sloan Missouri Basin program power marketing program;

(3) Palisades powerplant enlargement, Anderson Ranch powerplant unit, and Minidoka powerplant rehabilitation and enlargement shall be marketed through the Federal Columbia River Power System; and

(4) Boca powerplant unit and Prosser powerplant unit shall be marketed under arrangements to be made by the Secretary of Energy in accordance with authority set forth in section 5(a) of this Act.

SEC. 6. Powerplants authorized in this Act shall be designed, constructed, and operated in such a manner as to be compatible with valid existing water rights or water delivery to the holder of any valid water service contract.

SEC. 7. The interest rate used for computing interest during construction and interest on the unpaid balance of the reimbursable cost of a powerplant authorized in this Act shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which construction of such powerplant commenced, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations which are neither due nor callable for fifteen years from the date of issue.

SEC. 8. (a) There are hereby authorized to be appropriated beginning October 1, 1983, to the Secretary of the Interior for construction of the powerplants authorized in this Act the amounts set forth in subsection (b), on the basis of October 1981 price levels, plus or minus such amounts as may be justified by reason of ordinary fluctuations of construction cost indexes applicable to the type of construction involved herein. There are also authorized to be appropriated to the Secretary of the Interior such additional sums as may be required for the cost of replacement capacity, energy, or both purchased under section 2, and for the operation and maintenance of the Federal powerplants authorized by this Act.

(b)(1) Friant powerplant unit, $25,390,000.

(2) Whiskeytown powerplant unit, $3,390,000.

(3) Yellowtail Afterbay powerplant, $24,200,000.

(4) Red Bluff powerplant unit, $38,030,000.

(5) Stony Gorge powerplant unit, $4,020,000.

(6) Monticello powerplant unit, $11,830,000.

(7) Palisades powerplant enlargement, $65,300,000.

(8) Anderson Ranch powerplant unit, $13,200,000.

(9) Minidoka powerplant rehabilitation and enlargement, $60,000,000.

(10) Boca powerplant unit, $840,000.

(11) Prosser powerplant unit, $1,240,000.

(c) There are also authorized to be appropriated beginning October 1, 1983, such sums as may be required by the Secretary of Energy to accomplish the purposes of section 2 of this Act.

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II

98TH CONGRESS
1ST SESSION

S. 448

To authorize rehabilitation of the Belle Fourche irrigation project, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 3 (legislative day, JANUARY 25), 1983

Mr. ABDNOR (for himself and Mr. PRESSLER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize rehabilitation of the Belle Fourche irrigation project, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the general plan for the Belle Fourche project, South Dakota, heretofore authorized for construction by the Secretary of the Interior, May 10, 1904, pursuant to the Reclamation Act of 1902 (32 Stat. 388), is modified to include construction, betterment of works, water conservation, recreation, and fish and wildlife conservation and development. As so modified, the general plan is reauthorized under the designation "Belle Fourche unit" of the Pick-Sloan Missouri Basin program.

Sec. 2. (a) The Secretary of the Interior (hereinafter referred to as the "Secretary"), is authorized to negotiate and execute an amendatory repayment contract with the Belle Fourche irrigation district covering all lands of the existing Belle Fourche project. This contract shall replace all existing contracts between the Belle Fourche irrigation district and the United States.

(b) The period of repayment of the construction and rehabilitation and betterment costs allocated to irrigation and assigned to be repaid by the irrigation water users shall be not more than forty years from and including the year in which such amendatory repayment contract is executed.

(c) During the period required to complete the rehabilitation and betterment program and other water conservation works, the rates of charge to land class in the unit shall continue to be as established in the November 29, 1949, repayment contract with the district, as subsequently amended and supplemented; thereafter, such rates of charge and assessable acreage shall be in accordance with the amortization capacity and classification of unit lands as then determined by the Secretary.

Sec. 3. (a) All miscellaneous net revenues of the Belle Fourche unit shall accrue to the United States and shall be applied against irrigation costs not assigned to be repaid by irrigation water users.

(b) Construction and rehabilitation and betterment costs of the Belle Fourche unit allocated to irrigation and not assigned to be repaid by the irrigation water users nor returned from miscellaneous net revenues of the unit shall be returnable from net revenues of the Pick-Sloan Missouri Basin program within fifty years from and including the year in which the amendatory contract authorized by this Act is executed.

SEC. 4. (a) The provision of lands, facilities, and project modifications which furnish recreation and fish and wildlife benefits in connection with the Belle Fourche unit shall be in accordance with the Federal Water Project Recreation Act (79 Stat. 213), as amended.

(b) The interest rate used for purposes of computing interest during construction and interest on the unpaid balance of the capital cost allocated to interest-bearing features shall be determined by the Secretary of the Treasury as the beginning of the fiscal year in which construction of said interest-bearing features is initiated, on the basis of the computed average interest payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue.

SEC. 5. Appropriations heretofore or hereafter made for carrying on the functions of the Water and Power Resources

Service shall be available for credits, expenses, charges, and costs provided by or incurred under this Act. The Secretary is authorized to make such rules and regulations as are necessary to carry out the provisions of this Act.

SEC. 6. The Secretary is authorized to amend existing contracts and enter into additional contracts as may be necessary to implement and facilitate any future agreement between the Belle Fourche Irrigation District and non-Federal entities involving the sale of Belle Fourche project water for use by such non-Federal interest for other than irrigation purposes: *Provided*, That the net proceeds from such transactions between the Secretary, the Belle Fourche Irrigation District, and such non-Federal interest shall be paid to the United States as reimbursement of the cost of the works authorized by this Act, that such transactions are not in violation of applicable State laws, and that such transactions shall be subject to the consent and conditions of the State of South Dakota to such water use by such non-Federal interest in accordance with the laws of South Dakota and the provisions of the Belle Fourche River Compact between the States of Wyoming and South Dakota to which the consent of Congress was given in the Act of February 26, 1944 (ch. 64, 58 Stat. 94).

SEC. 7. There is hereby authorized to be appropriated beginning October 1, 1983, for the rehabilitation and betterment of the irrigation facilities of the Belle Fourche unit and recreation and fish and wildlife measures as authorized by this Act, the sum of $42,000,000 (based on January 1981 prices), plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction cost indexes applicable to the types of construction involved herein.

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23-353 O—83——2

II

98TH CONGRESS
1ST SESSION

S. 672

To amend the Reclamation Safety of Dams Act of 1978 to authorize additional appropriations, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 3 (legislative day, FEBRUARY 23), 1983

Mr. McCLURE (for himself, Mr. GOLDWATER, and Mr. WALLOP) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To amend the Reclamation Safety of Dams Act of 1978 to authorize additional appropriations, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471, 43 U.S.C. 506, et seq.) is amended as follows:

(1) In section 2, following "modifications" insert "or replacement".

(2) In section 4, wherever the word "modification" appears insert thereafter "replacement".

(3) In section 5, (a) in the first sentence after "$100,000,000" delete the comma and insert, "and, effective

October 1, 1983, not to exceed an additonal $550,000,000,"; change "construction to modify an existing dam" to read "construction to modify or replace an existing dam"; and delete the period at the end of the proviso by inserting a colon and the following additional proviso: *Provided further*, That such obligation may be made prior to the expiration of such sixty days in any case in which the respective committee of jurisdiction in the House of Representatives and the Senate approve an earlier date and notify the Secretary, in writing, of such approval." and (b) in the second and third sentences wherever the words "modification or modifications" appear insert thereafter "or replacement".

(4) Following section 11, insert the following new section 12:

"SEC. 12. Included within the scope of this Act are Fish Lake, Four Mile, Ochoco, Savage Rapids Diversion and Warm Springs Dams, Oregon; Como Dam, Montana; Little Wood River Dam, Idaho; Twin Buttes Dam, Texas; Foss Dam, Oklahoma, and related facilities: *Provided*, That the cost of foundation treatment, drainage, and instrumentation work planned or underway at Twin Buttes Dam, Texas, and Foss Dam, Oklahoma, shall be nonreimbursable and nonreturnable under Federal reclamation laws.".

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II

98TH CONGRESS
1ST SESSION

S. 739

To amend the Reclamation Safety of Dams Act of 1978 to authorize additional appropriations, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 9 (legislative day, MARCH 7), 1983

Mr. DECONCINI (for himself, Mr. MCCLURE, Mr. GOLDWATER, Mr. WALLOP, and Mr. CRANSTON) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To amend the Reclamation Safety of Dams Act of 1978 to authorize additional appropriations, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 5 of the Reclamation Safety of Dams Act of 1978 (Public Law 95-578; 43 U.S.C. 509) is amended—

(1) in the first sentence by striking out the comma after "$100,000,000" and inserting in lieu thereof "and, effective October 1, 1983, not to exceed an additional $550,000,000,"; and

(2) by striking out the period at the end thereof and inserting in lieu thereof the following: ": *Provided*

further, That an obligation made pursuant to the preceding proviso may be made prior to the expiration of sixty days in any case in which the respective committee of jurisdiction in the House of Representatives and the Senate approve an earlier date and notifies the Secretary in writing, of such approval.".

(b) Such Act is further amended by inserting at the end thereof the following:

"SEC. 12. Included within the scope of this Act are Fish Lake, Four Mile Ochoco, Savage Rapids Diversion and Warm Springs Dams, Oregon; Como Dam, Montana; Little Wood River Dam, Idaho; Twin Buttes Dam, Texas; Foss Dam, Oklahoma and related facilities. The cost of foundation treatment, drainage, and instrumentation work planned or underway at Twin Buttes Dam, Texas, and Foss Dam, Oklahoma, shall be nonreimbursable and nonreturnable under Federal reclamation laws.".

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STATEMENT OF SENATOR MCCLURE
HEARING ON S.268 AND S.672

I AM PLEASED THAT THE SUBCOMMITTEE ON WATER AND POWER HAS BEEN ABLE TO SCHEDULE TODAY'S HEARING TO TAKE TESTIMONY ON TWO BILLS IN WHICH I HAVE AN ABIDING AND PERSONAL INTEREST.

THE FIRST MEASURE IS S.268, WHICH WOULD AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT ADDITIONAL HYDROELECTRIC FACILITIES AT EXISTING BUREAU OF RECLAMATION DAMS. THE BILL DOES NOT AUTHORIZE THE CONSTRUCTION OF ANY NEW DAMS. ITS INTENT IS TO PROVIDE THE AUTHORITY TO MORE COMPLETELY UTILIZE THOSE STRUCTURES WHICH HAVE BEEN BUILT IN THE PAST.

THIS OR SIMILAR LEGISLATION PASSED THE SENATE IN BOTH THE 96TH AND THE 97TH CONGRESSES. THE BILL BEFORE US TODAY IS ALMOST IDENTICAL TO THAT WHICH PASSED THE SENATE LAST CONGRESS. HOWEVER, NON-FEDERAL DEVELOPMENT OF SOME OF THE SITES REQUIRES THAT THE LEGISLATION BE AMENDED. I LOOK FORWARD TO THE ADMINISTRATION'S COMMENTS AS TO HOW THE MEASURE SHOULD BE UPDATED.

THE SECOND BILL, S.672, WOULD AMEND THE SAFETY OF DAMS ACT OF 1978. BASED UPON THE ADMINISTRATION'S TESTIMONY OF LAST CONGRESS, ADDITIONAL FUNDING IS BADLY NEEDED IF THE BUREAU IS TO CARRY OUT THE DUTIES IMPOSED BY THE ACT. IN CONSIDERING THIS LEGISLATION, WE SHOULD KEEP UPPERMOST IN OUR MINDS THE FOUR BASIC OBJECTIVES WHICH THE ORIGINAL ACT SOUGHT TO ACHIEVE.

THE FIRST OBJECTIVE, OF COURSE, WAS TO PROTECT THE LIVES AND PROPERTY OF OUR CITIZENS BY PREVENTING DAM FAILURE. THE SECOND OBJECTIVE WAS TO PROTECT THE INVESTMENT OF THE FEDERAL GOVERNMENT IN THE DAMS AND RELATED STRUCTURES; THE THIRD, TO PREVENT DAM FAILURE AND THE ENSUING LIABILITY OF THE PROJECTS OF THE FEDERAL GOVERNMENT FOR DAMAGES. AND FINALLY, THE FOURTH GOAL WAS TO PROTECT THE ABILITY OF THE PROJECTS TO CONTINUE TO PERFORM, TO MEET CONTRACTUAL OBLIGATIONS, AND TO PROVIDE REVENUES TO THE TREASURY.

I WOULD REMIND MY COLLEAGUES ON THE COMMITTEE AND IN THE SENATE THAT WE NEED ONLY LOOK AT THE FAILURE OF TETON DAM IN MY HOME STATE OF IDAHO TO GRASP THE IMPORTANCE OF THESE GOALS. AS MANY OF MY DISTINGUISHED COLLEAGUES WILL RECALL, TETON DAM WAS COMPLETED BY THE BUREAU OF RECLAMATION IN NOVEMBER OF 1975. ON JUNE 5, 1976, IT FAILED, CAUSING ELEVEN DEATHS, DISRUPTING THE LIVES OF THOUSANDS, AND COSTING THE FEDERAL GOVERNMENT OVER $350 MILLION IN DAMAGE CLAIMS. AS A RESULT, THE FEDERAL GOVERNMENT IS NOW DENIED THE REVENUES FROM A 20-MEGAWATT POWERPLANT, AS WELL AS THE REVENUES AND THE SOCIAL AND ECONOMIC BENEFITS ACCRUING FROM IRRIGATION OF 150,000 ACRES. WE ARE ALSO $79 MILLION OUT OF POCKET FOR THE CONSTRUCTION OF TETON DAM AND POWERHOUSE.

IN LIGHT OF THIS TRAGIC EXPERIENCE, I WOULD URGE MY COLLEAGUES THAT WE MUST MOVE FORWARD WITHOUT DELAY IN RECTIFYING THE SERIOUS SAFETY PROBLEMS WHICH HAVE BEEN DISCOVERED AT SOME OF THE BUREAU'S FACILITIES.

STATEMENT BY SENATOR BARRY GOLDWATER

FOR THE WATER AND POWER SUBCOMMITTEE
OF THE SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

Thursday, March 24, 1983

The Reclamation of Safety of Dams Act of 1978

Mr. Chairman, it is always a pleasure to be associated with Senator McClure in the water resources area and that is why I am pleased to join you in re-introducing legislation (S. 672) to increase the level of authority for dam safety modifications from $100,000,000 to $650,000,000.

This authority should have been enacted into law last year. It was not. Those who characterized repairing the pot holes and sewer pipes in the east as "rehabilitating our national infrastructure" dismissed new and needed structural improvements at dams located above major population centers in the west as "pork barrel." They were wrong.

Dams and reservoirs have left an indelible imprint on the history of our country. They have furnished water for the cities and towns of colonial America, harnessed rivers and streams to power the industrial revolution, and transformed great plains and deserts into major cities.

The Comptroller General reported to the Congress three years ago this month (CED 79-30 March 8, 1979) that there are 50,000 public and private dams across these United States, the condition of which in nearly 40% "present a significant or high-hazard potential to downstream life and property if they should fail."

Mr. Chairman, the United States owns about 600 of these structures, with the Corps of Engineers having constructed some 400 and the Bureau of Reclamation having designed and built nearly 300.

The Bureau dam safety problem was put into sharp relief by the failure of the Teton Dam in Idaho. Among other things, that tragedy triggered an extensive re-evaluation of existing hydrologic records and produced new projections for the so-called "new inflow design flood."

Simply stated, both the Bureau of Reclamation and the Corps of Engineers agreed that more water can and probably will drain into our western watersheds than thought possible at the time most of these dams were designed and built by the federal government. The significance of this finding is that many of the structures are, according to the Bureau, inadequately designed to manage the volume and duration of possible rain and runoff.

This is not the appropriate forum to discuss or debate whether, for example, the watershed above Phoenix will receive 2 or 3 times as much rain and runoff as the dams on the Salt and Verde Rivers were designed to prudently manage. If the professionals down at the Bureau tell us that we can indeed get 3 times as much water over twice as long a period as once thought possible, it does not surprise me.

As a life long student of the desert southwest, I am surprised by very few things. I have seen the entire personality of a plateau change with the sudden approach of summer thunderheads. I have felt the warmth of the mid-morning sun chill by pelting hail within minutes. And, I have watched quiet canyons turn into raging rivers with the spring snowmelt.

As a long time student of the government process, I am not surprised by very many things that happen in the hearing rooms and hallways of Congress. However, I was surprised during the last Congress that the Administration first represented the federal dam safety problem as an issue of high national priority, then backpedaled away from appropriate resolution under the curtain of new cost-sharing requirements.

The Administration seems to be once again changing the long term basic principles of reclamation law. It is my understanding that the Bureau of Reclamation has recommended several amendments to the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471) that would among other things permit the Secretary of Interior to abandon the Department's legal responsibility for the safety of Bureau of Reclamation structures by simply declaring that a safety problem exists and imposing operating restrictions or breaching the dam. If there is a problem, in my opinion, it should be solved, and not simply abandoned or avoided.

Mr. Chairman, the true test for a successful program to rehabilitate federal structures that the government identifies as in need of repair -- and there are four Bureau of Reclamation dams in Arizona so classified -- is whether or not the safety modifications actually get done.

Dam safety repairs have traditionally remained within the federal purview largely because the dams were built by the federal government, and are still federally owned. The Bureau's 1983 position would again shift the cost or a large portion of the repair costs to the local entities. This shift of responsibility is unwarranted.

The legislation before the Committee today, S. 672, provides an orderly program for the timely review and rehabilitation of a good many of the Bureau dams, and I strongly support it as introduced. I want to sincerely express my appreciation to Senator Nickles for holding this hearing on this important legislation.

STATEMENT OF SENATOR DENNIS DeCONCINI: S.739 SUBCOMMITEE ON WATER AND POWER COMMITTEE ON ENERGY & NATURAL RESOURCES

Mr. Chairman, I am indeed pleased to have the opportunity to testify in support of S.739, legislation I have introduced along with a bi-partisan coalition of Senators who have long been supportive of a strong and sufficient Federal Dam Safety program for Reclamation Dams. I certainly thank you Mr. Chairman, and commend the committee staff, for your excellent work in holding these hearings so quickly, and for expediting action on this bill.

As you know, S.739 is very similar to the bill we introduced last year and which was reported to the Senate by this Committee. It differs somewhat from S.672 which was introduced by Senator McClure and several other Senators who have cosponsored both bills, but I believe those differences can be easily resolved. The two bills have the same purpose. They would allow the Bureau of Reclamation sufficient authorization to complete safety work on reclamation dams nationwide.

The Reclamation Safety of Dams Act of 1978 authorized the Secretary of the Interior to construct, restore, operate, and maintain new modified features at existing Federal reclamation dams for the purpose of dam safety. The act provides an authorization level of $100 million.

But the current authorization level cannot possibly cover the cost of existing and future dam safety work. The Bureau of Reclamation estimates the current cost of dam safety in at least twelve states to be upwards of $500 million. In my State of

Arizona alone, the modifications of immediate need on five Salt River project dams are in excess of $250 million. Moreover, the Bureau of Reclamation indicates that safety of dams studies show that as many as thirty-six additional dams may need safety related work in at least 14 other states, but cannot be initiated because of insufficient authorization.

In order to complete work that has been initiated and insure that future dams safety needs are met, it is necessary that authorization for the reclamation Safety of Dams Act be increased by at least $550 million.

I believe we should all be aware of the devastation that could result in the loss of lives and personal property from dam failures. We must take the necessary precautions now, to alleviate to the extent possible, the potential for threats from this type of disaster. I cannot emphasize strongly enough the possible consequences if we do not provide the sufficient authority to make the necessary adjustments. [illegible] I would like to include here, for the record, a series of questions which I submitted to Commissioner Broodbent of the Bureau of Reclamation during the recent Appropriations Committee hearing, and the answers the committee~~s~~ subsequently received. I would like to point out, however, for the sake of emphasis, one answer which tends to underline the urgency of the situation:

Question. Mr. Commissioner, is there any real potential for disaster at any of these federally owned facilities? Could you elaborate?

Answer. There is a very definite potenial for disaster magnitude occur to cause failure of any of these dams, the potential for loss of human life, large property damage, and loss of water users income is great. The possible cost to the Federal Government for disaster relief far exceeds the cost of modification.

The entire set of questions is as follows:

RECLAMATION SAFETY OF DAMS

Question. Mr. Commissioner, could you list those projects which have been identified but which cannot be initiated because of the current authorization ceiling under Public Law 95-578?

Answer. We anticipate the $100 million authorized by Public Law 95-578 will be obligated by the end of fiscal year 1986. Listed for the record are the dams currently identified as possibly needing safety modifications, but, after fiscal year 1986, will be unable to have construction initiated.

DAMS POSSIBLY NEEDING SAFETY MODIFICATIONS

Arizona: Bartlett, Horseshoe, Horse Mesa, Mormon Flat, and Theodore Roosevelt.

California: Casitas, Folsom, Friant, Glen Anne, Lake Tahoe, Stampede, O'Neill, San Luis, Shasta, and Trinity.

Colorado: Fruitgrowers and Olympus.

Idaho: Little Wood River, Palisades, and Soldiers Meadow.

Montana: Como.

New Mexico: El Vado and Navajo.

Nevada: Rye Patch.

North Dakota: Heart Butte and Jamestown.

Oklahoma: Altus, Arbuckle, and Foss.

Oregon: Cold Springs, Fourmile Lake, Ochoco, Owyhee, Savage Rapids diversion, and Warm Springs.

South Dakota: Pactola.

Texas: Twin Buttes.

Utah: Joes Valley and Newton.

Washington: Bumping Lake.

Wyoming: Fontenelle.

Question. Mr. Commissioner, how crucial is it, in your estimation, that the identified dam safety work be initiated? Do you have a preferred time table?

Answer. All of the dams identified as needing safety modification are considered crucial, not only in relation to the potential for loss of human life, but also because of the potentially large property damage and loss of income derived from the storage water.

We are prioritizing our modification schedule to complete construction on those dams which are most threatened first. At our present rate of progress, and provided sufficient funding exists, we anticipate modifying 56 dams by the end of fiscal year 1991.

Question. Mr. Commissioner, is there any real potential for disaster at any of these federally owned facilities? Could you elaborate?

Answer. There is a very definite potential for disaster at these dams. Should an earthquake or flood of sufficient magnitude occur to cause failure of any of these dams, the potential for loss of human life, large property damage, and loss of water users' income is great. The possible cost to the Federal Government for disaster relief far exceeds the cost of modification.

Question. Mr. Commissioner, the administration has testified that the costs of these safety projects should be shared by project beneficiaries. Could you state the administration's current policy? What percent of the costs should be borne by the beneficiaries? Should the Federal share be fully reimbursable?

Answer. Our policy is to follow the language of the Safety of Dams Act of 1978, since this is the law. The administration does support amending the act to maintain a high degree of commitment to get the identified dams modified, yet create an equitable method of repayment from the beneficiaries of this work. We have not formulated a complete policy of cost sharing which has the needed degree of flexibility to be completely equitable, but it does not seem reasonable to expect full reimbursability to the Federal Government when we still retain title to these dams.

Question. Mr. Commissioner, what similarities are there in terms of liability between dam safety programs and flood control projects?

Answer. Flood control projects are normally exempt from liability by virtue of the Flood Control Act of 1928. Many of the Bureau's dams do not have flood control as an authorized benefit and, therefore, may not come under the protection of the act. Also, a failure of one of our dams because of a seismic disturbance may not receive any liability protection.

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In conclusion, Mr. Chairman, we need to go forward with this legislation, and I thank you for taking this early action on the bill. These are Federal Dams, Mr. Chairman, and with every day's delay we are courting disaster. The legislation was held up last year because of a disagreement on cost-sharing, but as the Commissioner points out, the potential cost to the Federal Government, if one of these dams fail, far exceeds the cost of the modifications. And the cost in dollars will be a pretty lame excuse if the Congress has to answer to the cost in human life ~~if we have~~ resulting from a major dam failure anywhere in this country.

Senator **Nickles**. Gentlemen, we welcome you before this committee. We appreciate your attendance and also your cooperation with the committee.

Senator Pressler and Senator Abdnor, would you care to make your statements concerning the bills which you cosponsored?

Senator Hecht, do you have any opening remarks that you wanted to make?

STATEMENT OF HON. CHIC HECHT, A U.S. SENATOR FROM THE STATE OF NEVADA

Senator **Hecht**. Yes, Mr. Chairman. I want to thank you for the prompt attention you have given to the four bills pending before the Water and Power Subcommittee today.

Each of these bills share a common thread of development of improving water resource projects in the American West where now more than ever it is critical that water and energy resources be used efficiently.

Of special interest to this Senator is Commissioner Broadbent's testimony on S. 268, a bill which would authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric power facilities at 11 existing Bureau of Reclamation dams.

I want to commend the Commissioner and the administration for their leadership in recommending the authorization of powerplants operating and new visitor facilities at Hoover Dam in Nevada. The Commissioner is keenly aware of the fact that the 50-year allocation contract for Hoover power is due to expire in 1987 and the proposed operations are an important element in the negotiation of the new allocation contract between Nevada, Arizona, and the city of Los Angeles.

Visitor facility improvements are also sorely needed to insure that the ever-increasing number of tourists are accommodated safely and efficiently.

The administration has recommended that the upgrading of the visitor facilities be financed by power revenues from the dam. This will undoubtedly touch off some controversy among Hoover power users, but when considering the broad benefits to be gained from these improvements, I think it is entirely appropriate that costs be shared in this way.

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Again, I want to thank Chairman Nickles for scheduling today's hearing. I have known Bob Broadbent for a long, long time. I am very proud that he is here representing our country and the State of Nevada.

Thank you very much, Mr. Chairman.

Senator Nickles. Thank you, Senator Hecht.

Senator Abdnor, do you care to make your statement?

Senator Abdnor. Senator Pressler can go first.

STATEMENT OF HON. LARRY PRESSLER, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator Pressler. Jim and I, Tom and others have worked a long time on the Belle Fourche irrigation project, and we have some fine people here. I will be very brief and put most of my statement in the record.

We also are very proud to have Bob Donaldson and Harold Skjoldal from Newell, S. Dak., to appear as over the years there has been that group of citizens who have worked hard on this project, the rehabilitation of the Belle Fourche irrigation project.

I would first of all like to thank you, Mr. Chairman, and your committee for holding hearings on S. 448, the bill to authorize the rehabilitation of the Belle Fourche irrigation project, and for allowing me to testify before your subcommittee.

As you know, I have joined with my colleague Senator Abdnor and we are working on this legislation. The Belle Fourche irrigation project was authorized under the Federal Reclamation Act of 1902 and was built between 1902 and 1914. Since the initial construction the project has never been modernized or rehabilitated. The project has been very successful and has provided hay and grain for the livestock industry in the surrounding area.

The relatively small 57,000-acre project provides water to 372 farmers in the Belle Fourche area. However, these 372 farms provide needed feed for livestock in a 10,000-square-mile area in a three-State area. With South Dakota being the most agricultural State in the Nation, and with cattle being the largest industry in the State, the stabilizing influence of the Belle Fourche irrigation project is essential.

Unfortunately, the main features of the Belle Fourche irrigation project have passed their useful lifespan. Presently a great deal of water is lost to seepage and many dam safety features are lacking, so if the project is to continue to beneficially serve this area, these features must be rehabilitated. Modernization of the facility would increase the efficiency of the project and reduce maintenance costs.

Finally, rehabilitation of the Belle Fourche irrigation project would help the area's economy. The communities in the surrounding area are dependent upon the farm economy which is greatly dependent upon the Belle Fourche irrigation project. The construction work created by the rehabilitation of the project would also boost the local economy.

Mr. Chairman, in conclusion I want to urge your subcommittee to once again take early positive action on this measure.

I also want to thank you for allowing me again to present my testimony here today.

[The prepared statement of Senator Pressler follows:]

HEARING TESTIMONY
BEFORE THE
SUBCOMMITTEE ON WATER AND POWER
OF THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
ON
S. 448 -- REHABILITATION OF THE BELLE FOURCHE IRRIGATION PROJECT

MR. CHAIRMAN, I WOULD FIRST LIKE TO THANK YOU FOR HOLDING HEARINGS ON S. 448, A BILL TO AUTHORIZE THE REHABILITATION OF THE BELLE FOURCHE IRRIGATION PROJECT, AND FOR ALLOWING ME TO TESTIFY BEFORE YOUR SUBCOMMITTEE. AS YOU KNOW, I HAVE SPONSORED THIS LEGISLATION IN CONJUNCTION WITH SENATOR ABDNOR AND THE SENATE ADOPTED A SIMILAR MEASURE LAST YEAR.

THE BELLE FOURCHE IRRIGATION PROJECT WAS AUTHORIZED UNDER THE FEDERAL RECLAMATION ACT OF 1902 AND WAS BUILT BETWEEN 1902 AND 1914. SINCE THE INITIAL CONSTRUCTION, THE PROJECT HAS NEVER BEEN MODERNIZED OR REHABILITATED. THE PROJECT HAS BEEN VERY SUCCESSFUL AND HAS PROVIDED HAY AND GRAIN FOR THE LIVESTOCK INDUSTRY IN THE SURROUNDING AREA.

THE RELATIVELY SMALL 57,000 ACRE PROJECT PROVIDES WATER TO 372 FARMERS IN THE BELLE FOURCHE AREA. HOWEVER, THESE 372 FARMS PROVIDE NEEDED FEED FOR LIVESTOCK IN A 10,000 SQUARE MILE AREA IN A 3 STATE AREA. WITH SOUTH DAKOTA BEING THE MOST AGRICULTURAL STATE IN THE NATION, AND WITH CATTLE BEING THE LARGEST INDUSTRY IN THE STATE, THE STABILIZING INFLUENCE OF THE BELLE FOURCHE IRRIGATION PROJECT IS ESSENTIAL.

UNFORTUNATELY, THE MAIN FEATURES OF THE BELLE FOURCHE IRRIGATION PROJECT HAVE PASSED THEIR USEFUL LIFESPAN. PRESENTLY, A GREAT DEAL OF WATER IS LOST TO SEEPAGE AND MANY DAM SAFETY FEATURES ARE LACKING. SO IF THE PROJECT IS TO CONTINUE TO BENEFICIALLY SERVE THE AREA, THESE FEATURES MUST BE REHABILITATED. MODERNIZATION OF THE FACILITY WOULD INCREASE THE EFFICIENCY OF THE PROJECT AND REDUCE MAINTENANCE COSTS.

FINALLY, REHABILITATION OF THE BELLE FOURCHE IRRIGATION PROJECT WOULD HELP THE AREA'S ECONOMY. THE COMMUNITIES IN THE SURROUNDING AREA ARE DEPENDENT UPON THE FARM ECONOMY, WHICH IS GREATLY DEPENDENT UPON THE BELLE FOURCHE IRRIGATION PROJECT. THE CONSTRUCTION WORK CREATED BY THE REHABILITATION OF THE PROJECT WOULD ALSO BOOST THE LOCAL ECONOMY.

MR. CHAIRMAN, IN CONCLUSION I WANT TO URGE YOUR SUBCOMMITTEE TO ONCE AGAIN TAKE EARLY POSITIVE ACTION ON THIS MEASURE. I ALSO WANT TO THANK YOU FOR ALLOWING ME ONCE AGAIN TO PRESENT MY TESTIMONY HERE TODAY.

Senator NICKLES. Thank you, Senator Pressler. Senator Abdnor?

STATEMENT OF HON. JAMES ABDNOR, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator ABDNOR. Thank you, Mr. Chairman, Senator Hecht. I do appreciate the opportunity to appear before you once again, and I do say once again because I have been here many times, water is a very important subject to me. As you know, I am chairman of the Water Resources Committee of the Public Works Committee, and I work closely with your committee, too, but I am here to urge reauthorization of the Belle Fourche irrigation project, and I concur in what Senator Pressler has just stated.

I want to be brief. I have a more detailed statement I would ask unanimous consent be placed in the record.

Senator NICKLES. The statement will be entered into the record.

Senator ABDNOR. Having passed the Senate last year without any objection at all, Mr. Chairman, S. 448 is in a sense an old bill, and the committee has already established a strong record for the enactment.

Furthermore, there is a precedent for S. 448 in Wyoming's Riverton unit which was reauthorized in the late 1960's. It should be noted that the Belle Fourche irrigators will be paying nearly twice as many dollars as the Riverton irrigators will. Now we simply have not received our due regard under the Pick-Sloan Missouri basin program, and it is within the means of this committee to rectify the wrong which I feel that is really wrong, that has been done to South Dakota. I am not going to go into detail and reiterate all of the history of the Pick-Sloan program, but suffice it to say that we are not here asking for any kind of a handout or subsidy I don't believe. We are here asking for what I feel is a partial repayment of a debt in the agreement, a half-a-million acre debt for which repayment was clearly specified in the Flood Control Act of 1944. Repayment is to be made in irrigation development funding and through the provision of low-cost hydropower for South Dakota irrigation projects, and I believe very, very strongly in that, and I am happy to say I think our Secretary of the Interior has said so many times, that South Dakota made a great contributor and has a great repayment coming for the sacrifices they made.

This commitment so far has not been honored, but I guess it is better late than never, Mr. Chairman. I strongly urge the committee to move S. 448 without further delay.

Accomplishment of needed improvements at Belle Fourche is vital not only to the irrigators on the project and to the economic health of the region, but also to restoration of the South Dakotans that the Federal Government can be trusted to honor its commitment.

Mr. Chairman, I just want to mention the previous chairman of the subcommittee, the past session, was Senator Murkowski who came to my State, went to this very area, spent a whole day in a hearing, and I think he was most impressed. I think your staff, Mr. Brown, was there and had to sit through those. I don't mean to put him on the spot, but I could tell from his reception that he was impressed by what he saw. I wish we could have had you along. I think you would agree. We think this is a most deserving project that these people are entitled to in my State, and I certainly would like to urge the committee's favorable consideration.

Thank you very much.

[The prepared statement of Senator Abdnor follows:]

Senator James Abdnor
In Support of S. 448, to Reauthorize the Belle Fourche Irrigation Project
Before the Subcommittee on Water and Power
March 24, 1983

Chairman Nickles and members of the committee, I appreciate the opportunity to appear before you once again to urge reauthorization of the Belle Fourche irrigation project. South Dakota's Secretary of Water and Natural Resources, Warren "Bob" Neufeld, and Chairman Bob Donaldson of the Belle Fourche Irrigation District will be testifying later.

Having passed the Senate last year without objection, Mr. Chairman, S. 448 is in a sense "old business" and the committee has already established a strong record for enactment. (See publications 97-41 and 97-67 and S.Rept. 97-364.) Furthermore, there is precedence for S. 448 in Wyoming's Riverton unit, which was reauthorized in the late 1960's and on which the Bureau tells us rehabilitation work is now nearing completion.

Certainly, my state is equally deserving and far more needy than our energy-rich sister to the west, and I might note in passing that South Dakota gave up about 5 times as much land for the Pick-Sloan program as Wyoming did (536,875 v. 110,240 acres). Yet Wyoming has benefitted from 379,365 acres of Reclamation irrigation while South Dakota has received only 76,587 acres of such development, and that's despite the fact we are supposed to receive about twice as much irrigation development under the Pick-Sloan Program (South Dakota -- 570,600 acres full service and 66,100 acres supplemental versus Wyoming -- 304,700 full and 71,600 supplemental) according to December 23, 1977, correspondence from former Deputy Assistant Secretary Daniel P. Beard.

The following data, furnished by the Bureau of Reclamation, compares projected cost and repayment at Belle Fourche with actual cost and repayment at Riverton:

	Riverton Unit	Belle Fourche Unit
cost	$45,829,000	$48,857,000
repayment	6,500,000	11,750,000
repayment percentage	14.2%	24%.

While the cost figure for Belle Fourche is only an estimate and may change, by the Bureau's calculations it is a better project than Riverton. At the very least it should be noted that the Belle Fourche irrigators will repay nearly twice as many dollars as the Riverton irrigators will.

The former chairman and still a member of the subcommittee, Senator Murkowski, came to my state for a field hearing and became convinced of the merit of our case. We simply have not received our due regard under the Pick-Sloan Missouri Basin Program, and it is within the means of this committee to rectify the wrong which has been done to us.

I will spare the committee a further reiteration of the history of the Pick-Sloan program, but suffice it to say we are not here asking for a handout or a subsidy: we are here asking for partial repayment of a debt, a half-million acre debt for which repayment was clearly specified in the Flood Control Act of 1944. Repayment is to be made in irrigation development funding and through the provision of low-cost hydropower for South Dakota irrigation projects. The commitment has thus far not been honored but, under former chairman Murkowski's leadership, several steps in the right direction were taken.

I know that the committee will continue to work to correct the inequities of the past, Mr. Chairman, and with your leadership I am very hopeful enactment of S. 448 will be the first, next step toward a responsible outcome based upon the Pick-Sloan commitments made to my state.

It has been said, Mr. Chairman, that "justice delayed is justice denied," and in a sense that is true in this case. It is impossible to say how many farmers and small businessmen might still be in operation in my state if irrigation had been fully developed to offset the dual ravages of drought and the loss of 500,000 acres which the Federal Government put under water for us. Undoubtedly we would still be among the lower tier of states in terms of per capita income, even if the Federal irrigation commitment had been kept in a more timely fashion. The committee knows very well that our state's economy, which is more dependent upon agriculture than that of any other state, would be far better off, however, so I will not belabor the point.

I do say "better late than never," though, Mr. Chairman and strongly urge the committee to move S. 448 without further delay. Accomplishment of needed improvements at Belle Fourche is vital not only to the irrigators on the project and to the economic health of the region, but also to restoration of the faith of South Dakotans that the Federal Government can be trusted to honor its commitments.

Thank you very much.

Senator **Nickles**. Thank you, Senator Abdnor. Congressman Daschle?

STATEMENT OF HON. THOMAS A. DASCHLE, A U.S. REPRESENTATIVE FROM THE STATE OF SOUTH DAKOTA

Mr. **Daschle**. Thank you, Mr. Chairman. The Senators have really clearly I think articulated the reasons why it should be built, and I, too, have a prepared statement that I would like to submit for the record, but I think the essence of what we are talking about here is simply that we have perhaps one of the single most important resources, that being a reclamation project, an irrigation project, that has been phenomenal in the kind of benefits economically and in every way to the development of western South Dakota.

Thousands of jobs depend upon it. For 70 years it has shown its value and its importance. It irrigates 57,000 acres in western South Dakota, and I think simply the rehabilitation that is necessary now will insure that for the indefinite future we are going to continue to be able to rely on this project as one of the best resources that we have available to us to insure the continued production and economic vitality of the entire western part of our State. It is that important to us. We are sort of preaching to the choir here because this committee certainly has a very good record in terms of showing its support for this project in the past, so we simply urge again your favorable consideration of this legislation, this project, and I am hopeful that we can show the same kind of favorable consideration in the House, so at long last we can get underway with what we believe to be one of the single most important projects in the State of South Dakota at this time, so I thank you for this time and consideration, and I sincerely hope that our delegation in a unified way—Republican, Democrat, Senate, and House—can work with you to insure that we show the people of South Dakota and the people of the Upper Midwest the importance that we place on irrigation in this particular project.

Thank you very much.

[The prepared statement of Mr. Daschle follows:]

TESTIMONY OF

CONGRESSMAN TOM DASCHLE
SOUTH DAKOTA

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER
COMMITTEE ON ENERGY AND NATURAL RESOURCES
U.S. SENATE

MARCH 24, 1983

Mr. Chairman and members of the Subcommittee, I welcome and appreciate the opportunity to testify before you today in support of S. 448, legislation which authorizes the modernization and rehabilitation of the Belle Fourche Project and reauthorizes this vitally important reclamation project as the Belle Fourche Unit of the Pick-Sloan Missouri River Basin program.

Reclamation of the arid and semiarid lands in the Western States in order to stabilize and stimulate local and regional economies was the objective of the Reclamation Act of 1902 which authorized the construction, operation, and maintenance of works for the storage, diversion, and development of scarce water resources. As a "grand daddy" of reclamation projects, the Belle Fourche Project, which was constructed by horse, plow, and dirt sled between 1906 and 1915, provides an unequivocal demonstration of the benefits and importance of sound reclamation.

Achieving the principal objective of reclamation, the Belle Fourche Project, located in Butte and Meade Counties, South Dakota, is a mainstay of the local economy, but its economic importance extends far beyond the narrow geographic confines of the project itself. Consisting of a reservoir covering 8,541 acres and related structures which provide for the irrigation of 57,000 acres, the Belle Fourche Project is the foundation of the livestock producing industry which is a dominant feature of the economy of western South Dakota and the surrounding areas of Wyoming and Montana as well. As the foundation of the livestock producing industry which is central to the economy of the tri-state region, comprised of western South Dakota and portions of Wyoming and Montana, the investment made in the original construction of the Belle Fourche Project, which has directly created thousands of job opportunities, and the investment to be made in the modernization and rehabiliation of this project represent only a small fraction of its economic value and importance.

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After nearly seven decades of service, many features of the Belle Fourche Project have served the anticipated useful life and require rehabilitation as would be expected. The legislation now being considered by the Subcommittee, S. 448, and the companion measure which I have introduced in the House of Representatives, H.R. 1282, authorize needed project improvements which are consistent with the originally authorized project, common sense good management, and reclamation policy. As a result of the enactment of this legislation and the completion of the improvements which are authorized, the reliability and efficiency of the Belle Fourche Project will be re-established and the project will continue to make its significant contributions to the local, area, and regional economies well into the next century economically and efficiently.

In addition to authorizing needed project improvements, the legislation also reauthorizes the Belle Fourche Project as the Belle Fourche Unit of the Pick-Sloan Missouri River Basin program. Reauthorized as the Belle Fourche Unit, the Belle Fourche project will be accorded the same treatment provided for other projects under the program.

One of the benefits of the rehabilitation program authorized by the legislation is improved water conservation. In recognition of enhanced water conservation, S. 448, as does H.R. 1282, provides for the sale, with all appropriate safeguards, of water surplus to the project. Revenues which are derived from the sale of water surplus to the project are applied to project rehabilitation and improvement costs.

Again, Mr. Chairman and members of the Subcommittee, I appreciate the opportunity to testify before you in support of S. 448. The infrastructure of our livestock producing based economy in western South Dakota, the Belle Fourche Project, is in need of refurbishing and improvement like the waterworks of our major American cities and I encourage the speedy and favorable consideration of this important measure by the Subcommittee.

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Senator NICKLES. Thank you, Congressman. I can compliment the delegation from South Dakota, particularly the Senators who have been relentless in their efforts to make sure that this bill would be brought before this committee, so I will complement them on their persistence, and also for their dedication to see that this would actually become a reality.

I might ask Senator Pressler, you mentioned in your testimony how many farmers would benefit from this irrigation district?

Senator PRESSLER. We have 372 farms. I don't know exactly how many farmers that is, but 372 farms. Maybe Bob Donaldson—do you know how many farmers that includes, Bob?

Mr. DONALDSON. Somewhere around 1,100.

Senator NICKLES. OK. I will just ask this question to any of you. How do you respond to the statement when people say, well, you are forcing the utility consumers to end up picking up the cost of benefits that should be more directly applied to the beneficiaries of irrigation.

Senator ABDNOR. This was an agreement set out under the Pick-Sloan plan. This is important to all of South Dakota, whether in the west or the east. This is very stabilizing. We are the most agricultural State in the Nation. Maybe some raise more products, but there has never been a State that is so dominated by agriculture in its economy as South Dakota is, and it is the one thing that has been helping us in years of drought and all, and my State was promised this in the Pick-Sloan plan. This was part of it.

We gave up 500,000 acres, Mr. Chairman. That came off the tax rolls years ago, out of production, took it out of our economy. I hate to keep harping on this, but this is important to everyone in South Dakota, and I think it is just a partial repayment for what we were asked to do. We have had absolutely nothing.

There have been many, many benefits that many of our sister States are sharing around the country, and it's great. We have a great potential, but it's disappointing to look at something that you have been told at the time it was put together, knowing you were supposed to receive some benefits out of it, and still not have any, and we think this is the first partial repayment we might receive, and I think the Pick-Sloan law clearly states the situation.

Senator NICKLES. Senator Hecht, do you have any questions?

Senator HECHT. No. Thank you very much.

Senator NICKLES. Gentlemen, we appreciate your appearance before the committee especially this early after a long couple of nights that we have had in the Senate, so I appreciate that, and also the Congressman. Thank you for your attention.

We will jump a little bit since we are on the Belle Fourche project and have Warren Neufeld, who is secretary of water and natural resources for the State of South Dakota, and also Robert Donaldson who is president of the board of directors of the Belle Fourche irrigation project.

Mr. DONALDSON. Mr. Chairman, may Mr. Casey accompany me to the table?

Senator NICKLES. That would be fine; whoever else you have with you would be fine.

STATEMENT OF WARREN R. NEUFELD, SECRETARY, DEPARTMENT OF WATER AND NATURAL RESOUCES, STATE OF SOUTH DAKOTA

Mr. **Neufeld**. My name is Bob Neufeld. I am secretary of water and natural resources for the State of South Dakota, and I am here representing the Governor and the State government of South Dakota at this committee hearing in favor of S. 448.

Mr. Chairman, I have prepared remarks that I have already submitted for the record and your staff has copies of them. I will briefly summarize and try and address some of the remarks that I think will be made later today. I have a copy of Mr. Broadbent's testimony. I would like to respond briefly to one point in that testimony in which he states the administration position that it is unfair to require the power users to pay for the portions of the Belle Fourche rehabilitation that the irrigators are unable to repay.

Many years ago, in 1944, there was an act called the 1944 Flood Control Act that was passed which essentially established six mainstem reservoirs on the Missouri River, four of which are located in South Dakota, and we flooded over 500,000 acres of land.

That act envisioned a grand scheme for development of the Missouri River Basin which called for exactly that, that the revenues from hydropower development would be used to repay the upper basin States in capital expenditures for water development to stabilize their agricultural economy.

Secretary Watt, the Secretary of the Interior, has stated many, many times that he is the last Secretary of the Interior that will ever hear or know or care about the Pick-Sloan commitment to South Dakota, that he intends to see it kept.

I fail to see the distinction where we sit here today and not 1 acre of Pick-Sloan irrigation development has occurred in the State of South Dakota since 1944 after we have given up 500,000 acres, I fail to see the difference that if we are to keep the commitment of Pick-Sloan to our State, why it should make any difference whether the hydropower revenues are reinvested in new projects in our State or in the rehabilitation and betterment of our projects that have simply outlived their useful life under the standards for which they were constructed.

The power users in the basin, the preference power in the basin, almost to a man support the concept of using hydropower revenues for the construction of water projects.

Senator **Nickles**. You say the power users?

Mr. **Neufeld**. Yes, sir. If you contact the preference power users groups—I can name several in our State. East River Electric Cooperative, for instance, has steadfastly repeatedly stated they support the concept of using hydropower revenues for the assistance of water development.

Senator **Nickles**. To carry that a little bit further, I am not that familiar with the grid where the expense would be borne over, but is it considerably larger than the irrigation district itself?

Mr. **Neufeld**. Yes; it is.

Senator **Nickles**. You are saying you think that people outside the irrigation district area substantially would support bearing some of the costs of the project?

Mr. **Neufeld**. Yes, sir. They recognize and they have repeatedly said so that the arrangement under which they are getting power at substantially lower rates today involved a returning the commitment to the State in which that power is generated. Less than 20 percent of the power that is generated in South Dakota stays in our State. The rest of it goes to other dependent States such as Nebraska, Iowa, Minnesota, and other States in the Missouri basin.

The power users there are cognizant.

Senator **Nickles**. The rest of the States would be bearing some of the cost of the project?

Mr. **Neufeld**. Sure.

Senator **Nickles**. Do you have anything to substantiate that those utility consumers would support that?

Mr. **Neufeld**. I don't have that here with me today, but I can provide you statement of preference power utilities indicating their support for the ultimate development concept and the concept in which utility revenues will pay for water development, yes, sir. I will be happy to submit that for the record.

Senator **Nickles**. What do you mean by preference power consumer?

Mr. **Neufeld**. Preference power customers are those—under the 1944 act, preference in consumption of power is given to governmental entities and electric cooperatives essentially.

Senator **Nickles**. Do you have any figures on what kind of impact we are talking about on those rates, what type of increase?

Mr. **Neufeld**. Yes; I do. It is our judgment that the way the power repayment is set up, that there should substantilly be no impact on rates, and that the repayment would occur in such a manner that the accounting is done in such a manner that there would be no impact on power rates.

Senator **Nickles**. Repayment over 50 years?

Mr. **Neufeld**. I believe so, under the normal reclamation procedures.

Senator **Nickles**. If thát timeframe was substantially shortened?

Mr. **Neufeld**. I have no figures on that.

Senator **Nickles**. Go ahead. I am not meaning to interrupt you.

Mr. **Neufeld**. Well, the point I am trying to get at is that we are not setting a new precedent here. The Riverton project in Wyoming has been reauthorized as part of the Pick-Sloan project. It was not an original Pick-Sloan project. There are, according to our information—I will provide these names to the committee for the record—10 projects that are not Pick-Sloan projects that are currently receiving Pick-Sloan electricity at 2½ mils per kilowatt hour. They are not Pick-Sloan projects, nor was authorization given by Congress to use this electricity.

It is our understanding that it was done pursuant to a solicitor's opinion in the Department of the Interior many years ago, and it was done on an administrative basis. We had to come to this body last year and ask for permission to use Pick-Sloan power to support an Indian irrigation project in our State called the Grass Ropes unit. I believe Mr. Brown is familiar with that bill. It went through this subcommittee.

We are just trying to figure out when and where the commitment to the State of South Dakota is going to be kept. As Secretary of the Interior Watt has stated, it seems to be going everywhere else but into South Dakota, and we just would like to see the promise kept.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Neufeld follows:]

STATEMENT OF

WARREN R. NEUFELD
SECRETARY

DEPARTMENT OF WATER AND NATURAL RESOURCES
STATE OF SOUTH DAKOTA

Mr. Chairman and members of the Committee, my name is Warren R. (Bob) Neufeld, Secretary of the South Dakota Department of Water and Natural Resources. I would like to thank the Committee for this opportunity to review the reasons why the Belle Fourche Irrigation Project is in need of rehabilitation, why the project should be reauthorized as a unit of the Pick-Sloan Missouri Basin Program and why this matter is so important to South Dakota.

The Belle Fourche Irrigation Project was one of the first such projects constructed under the federal reclamation program. Authorization was received 79 years ago in 1904, with construction commencing in 1905 and completed in 1914. Although the project has very admirably served the western part of South Dakota, the material and equipment used to build the storage dam are obsolete by anyone's standards. For example, wooden flumes, unlined canals, hand operated gates and unreinforced concrete have now withstood almost a century of extremely hot summers and freezing winters. Many of the structures and facilities have served their expected useful life and are now in need of renovation or replacement. These obsolete facilities have caused the operation and maintenance costs of the project to increase each year, with some of the structures requiring more maintenance expense than can be prudently made. The Bureau of Reclamation estimates that at least 20,000 acre-feet a year could be saved if rehabilitation of the Belle Fourche project would take place. Furthermore, based on historcal precedent fully 40% of the dollars spent on the Belle Fourche Rehabilitation project would go to paying salaries and wages, certainly important at this time.

There are certainly many sound engineering and water conservation reasons justifying the rehabilitation and modernization of the Belle Fourche project.

Of more concern to this Committee, however, should be the preservation of this project's output for the benefit of the economy of the farming and business community dependent on it. Without the project, most of the project land would revert back to dry pasture and hay. The stable feed source that has supported the cattle and hogs fed for the last 75 years in Butte County and the adjacent areas of Montana and Wyoming surrounding Belle Fourche would then be gone. The importance of this relationship is perhaps best illustrated by the fact that when South Dakota experienced a drought from 1974 to 1976, cattle numbers in South Dakota except for the Belle Fourche area dropped dramatically. From 1974 to 1978, all cattle in South Dakota decreased by 25%, beef cows that calved decreased by 30% and hog numbers declined by 27%. In Butte County, where the Belle Fourche project produces most of the corn and other livestock feed, all cattle decreased by only six percent, beef cows decreased by 13% and hog numbers increased by 11%. These figures show the significant impact a stable feed supply can have on livestock production. This is especially important when you consider that over 70% of South Dakota farmers' total cash receipts are from the sale of livestock.

The impacts of drought in this state have been disastrous. The Farmers Home Administration estimated that losses caused by drought were $1 billion in 1976 and $600 million in 1980. The rehabilitation of the Belle Fourche project will continue to provide a buffer against the disastrous effects of drought in Butte County and the tri-state area. The bill before you is in essence a reauthorization for the future of agriculture in much of western South Dakota.

There are several logical reasons why the Belle Fourche Irrigation Project should be reauthorized under the Pick-Sloan Missouri Basin Program. First of all, the project is located in the Missouri River Basin and the Belle Fourche River contributes water to the operation of the four mainstem dams in South Dakota. The project was not included under the Flood Control Act of 1944, whereby irrigation development costs could be repaid by power revenues, because the project was operational and did not require any additional federal funding. The Belle Fourche project was, however, identified in the Act to receive supplemental water for irrigation.

Second, during the 40 years that have passed since the passage of the 1944 Flood Control Act, the Belle Fourche project has continued to deteriorate substantially and now is in need of revenue from power generation to restore its effectiveness. This revenue assistance will not have an impact on the Pick-Sloan Missouri River power rates and will not decrease the financial assistance available for other irrigation projects. The irrigation previously and currently scheduled for development as part of the Pick-Sloan Program is not even close to being realized. We believe, therefore, the existing power revenues are more than adequate to include repayment of the portion of costs beyond the Belle Fourche project water users' ability to pay.

A third reason why the Belle Fourche Irrigation Project should be reauthorized under the Pick-Sloan Program is that reauthorization would give substantive meaning to Congressional and Administration acknowledgement that South Dakota should be compensated as promised for the loss of over 500,000 acres of prime land flooded by the construction of the Missouri River mainstem dams. South Dakota was promised that the federal government would develop sufficient irrigation to at least offset the amount of land that was lost. Unfortunately now, almost forty years later, the first federally irrigated acre in South Dakota has yet to be developed.

The last and perhaps most significant reason supporting Belle Fourche reauthorization is that consistency with past federal policy all but requires that the Belle Fourche project be included as part of Pick-Sloan. In September, 1970 Congress considered a proposal very similar to the one before you today. Public Law 91-409 reauthorized the entire Riverton project in central Wyoming as the Riverton Unit of the Pick-Sloan Program. The Riverton project, like the Belle Fourche project, is an old Bureau of Reclamation facility that, except for its third division, was built and operating before the Pick-Sloan Flood Control Act of 1944 was enacted. Both serve approximately the same size of area (60,000 acres). Like the Riverton reauthorization, reauthorization for the Belle Fourche calls for project rehabilitation and betterment. As with Riverton in 1970, today there is a great need to put the Belle Fourche project on a sound operating and fiscal basis. Like Riverton, the obligation of the Belle Fourche Irrigation District will be assumed in part by revenues from the net proceeds of the Missouri Basin power system, thereby providing financial assistance for those costs which are beyond the water users' current payment ability. The total estimated project cost of the Belle Fourche project as reauthorized ($48.8 million) compares favorably to the total estimated project cost ($45.8 million) for Riverton. Unlike Riverton, however, the Department of the Interior will not endorse rehabilitation of the Belle Fourche project.

Such opposition is extremely difficult to understand, especially when you consider the facts and figures. The Riverton project repayment contract requires the water users to return approximately 14% of the project cost over 50 years. Belle Fourche, however, will return approximately 20% over 40 years. Also, new federal policy applicable to Belle Fourche but not Riverton allows an analysis of the irrigation district's repayment capability every five years. Thus the Belle Fourche Irrigation District may end up returning substantially more than 20% of the project cost.

Testimony on behalf of the Department of Interior submitted one year ago in opposition to Belle Fourche emphasized the best interests of the general taxpayer and the cost to them should Belle Fourche reauthorization pass. Speaking on behalf of the Department, the Commissioner of the Bureau of Reclamation, Robert N. Broadbent, stated that the bill proposed last year is "contrary to the Administration's policy requiring direct beneficiaries of federal projects to pay for the costs of the benefits they recieve." The policy in the past 40 years for irrigation has always been to require reimbursement according to the extent of the water users' ability to pay. If the Administration's policy is going to require irrigation projects to pay entirely for themselves, as Mr. Broadbent implies, then I suspect many viable existing systems will in the future face the same trouble we are facing today with Belle Fourche and no additional irrigation projects will ever be built. These other existing system operators may also face the prospect of losing a livelihood that supported their fathers and grandfathers. The indirect beneficiaries of irrigation projects would in turn face the same prospect.

The issue you must now address is whether a viable irrigation project should be allowed to deteriorate, whether the Belle Fourche area economy should be subjected to the ravages of drought, whether Belle Fourche should just be added to the long list of inefficient water systems, whether a financial investment should be made as a preventitive cure instead of providing financial drought relief as an inadequate treatment of the illness, whether the federal debt owed to South Dakota should be further ignored, and whether such total neglect is really in the best interests of the federal taxpayer. We strongly suggest the answer to these questions is an emphatic "No".

South Dakota today asks that you support the people of the Bell Fourche project as you have supported other domestic irrigation projects.

A31801MH.WP

Senator NICKLES. Thank you very much for your statement, Mr. Donaldson.

STATEMENT OF ROBERT L. DONALDSON, PRESIDENT, BOARD OF DIRECTORS, BELLE FOURCHE IRRIGATION DISTRICT, ACCOMPANIED BY JIM CASEY, CONSULTANT

Mr. DONALDSON. Thank you. It is a pleasure to be here today. Mr. Chairman, members of the subcommittee, for the record, I am Robert L. Donaldson, president of the board of directors of the Belle Fourche Irrigation District at Newell, S. Dak. My testimony represents the official position of the irrigation district as established by its board of directors.

Mr. Chairman, some of my statement is material which was presented to the subcommittee at the field hearings on this matter at Newell, S. Dak., September 11, 1981, and in Washington, D.C., on February 12, 1982. The position of the board has not changed. We still support Senator Abdnor's bill, S. 448, and urge your approval of it.

The Belle Fourche Irrigation District through contract with the Secretary of the Interior operates the Belle Fourche project constructed by the Bureau of Reclamation shortly after the turn of the century. The district also as a matter of contract has undertaken to repay certain costs of construction incurred in building and rehabilitating the project over the several decades since water was first delivered. I will return to this subject in detail later on.

Mr. Chairman, the Belle Fourche project is one of the oldest projects constructed under the Federal Reclamation Act of 1902. It was approved and authorized for construction in 1904, was built during the period of 1905 to 1914 with the first public lands opened for entry in 1907 and the first project water delivered in 1908, so you can see that there are some project facilities that have been in service for 75 years, and the entire project has been operational for 70 years.

The major facilities of the project consist of a diversion dam on the Belle Fourche River about 2 miles northeast of the city of Belle Fourche, a supply canal extending from this diversion point to the Belle Fourche Reservoir, an impoundment created on Owl Creek by Orman Dam. This reservoir has a regulatory capacity of 185,000 acre-feet and discharges water into the North Main and South Main Canals for distribution to the irrigable lands of the district. This is accomplished through a series of underlying laterals and subcanals. In total, the project comprises 95 miles of main canal, 450 miles of open, unlined laterals, 225 miles of open drains, and 7 miles of covered drains. This system serves about 57,100 acres of land operated by approximately 389 different farmer water users. This includes delivery of water to about 2,400 acres of land situated adjacent to the supply canal between the diversion dam and the storage reservoir.

The project was originally built as a single-purpose irrigation project and only provides fish and wildlife, recreation, and flood control benefits in a minor and incidental way. The Belle Fourche project is the backbone of the livestock industry for most of western South Dakota, northeastern Wyoming, southeastern Montana, and southwestern North Dakota. Hay has gone as far west as Utah and east to Wisconsin over a period of years. The project provides grain, forage, and pasture base for sustaining livestock herds. Without this feed base the entire four State economy would suffer.

Accordingly, this proves that there is a desperate need to rehabilitate the project to enable it to do the things that a modern, well-designed irrigation project is capable of doing.

Mr. Chairman, I would like to point out what the passage of S. 448 would mean to our area economy. First of all, from figures supplied from the Bureau of Reclamation showing the direct and indirect benefits for each $1 million spent, the figures show that each $1 million will equal 55 work years. You can quickly see the stabilizing effect that S. 448 will have. This will be very much in line with congressional intent for supplemental jobs appropriations.

Let me now discuss our problems and their origins. When this project was built, the work was accomplished with horsedrawn equipment, and the assumption was evidently made it would be maintained in the same way. Operating roads and access to major structures was not provided, and to this day is not adequate. This is only one factor of high maintenance costs brought about by crews spending more time getting to the job than it often takes to perform the work after they get there.

A far more significant problem lies in the facilities themselves. They are, simply stated, worn out. This is no condemnation of the original design and construction standards for at the time they were built they were then state of the art, but 75 years is a long time for unreinforced concrete, wood, and metal to survive the elements. Also the project was built before the engineering profession understood that certain adverse reactions between cement and aggregates happened over time to weaken and destroy concrete structures.

Also our channel prisms have become either silted or eroded to the extent that they are hardly recognizable as canals and laterals. In the inlet canal we have suffered such a diminishing of capacity that we are prevented from diverting substantial quantities of water from the Belle Fourche River in times of adequate flow in that stream. In other situations the absence of lining has contributed to excessive seepage losses from canals and laterals. In other instances, scouring of ditch bottoms has allowed the lateral to penetrate highly pervious materials and there are actually some places where it is almost impossible to get the water from one end of the lateral to the other end.

Rehabilitation of the project will provide for construction of accurate water-measuring devices, resulting in better control and distribution of water.

We realize that the question can be asked and will be asked how did the project facilities get so badly run down? And the question can also be asked if it were not the irrigation district's responsibility to keep the project in good condition? In response to such questions I can only say that it didn't happen all at once. This has gradually come on us over almost 75 years. Each year we devote most of our income over and above mandatory payments to the United States to the most pressing maintenance problems. It is our sincere conviction that the project can never, cannot ever be re-stored to a satisfactory operating condition through annual assessments of water users, even if we had a total moratorium on our construction payments over a number of years.

The only thing that will do the job is a general, overall upgrading of the project facilities both from the point of view of introducing modern design concepts and the use of modern construction materials. In short, the board of directors of the irrigation district supports a program of rehabilitation similar to that described in the draft report of the Bureau of Reclamation dated September 1979. That report presents a plan at an estimated cost of $31 million to put our project in completely up-to-date shape.

We would expect to be tendered an amendatory repayment contract which would replace and supersede all our existing contracts and which would provide for us to pay in accordance with our payment capacity for a new contract term as specified by the enabling legislation. Since these payments would not return the total Federal construction cost, we believe that access to Pick-Sloan Missouri basin power revenues should be authorized.

Mr. Chairman, what we are asking is that legislation be enacted to rehabilitate our project to present-day U.S. Bureau of Reclamation project construction standards.

To do any less than a total rehabilitation means that we shall have further deterioration of the physical facilities until the point is reached that the project is no longer operable. If this should occur, the four-State area would see the deterioration of economic foundation of the livestock and along with it corresponding losses of business and income from the secondary sector in most trade centers.

The Bureau of Reclamation is very interested in our problem here at the Belle Fourche project. We were successful in getting the September 1979 draft report prepared, and we appreciate the effort that has gone into identifying the physical needs of the project.

The board of directors of the Belle Fourche irrigation project has maintained that a rehabilitation and betterment contract would be totally inadequate in meeting the necessary rehabilitation of the project. This would only be a piecemeal approach to our problem, requiring repayment obligations at the same level as complete rehabilitation, and would only do about one-third of the work needed. The repayment capability of the project would be far better when the entire project is rehabilitated. Operation and maintenance costs will be reduced and savings would be available for repayment.

I would not like to talk a little bit about the water supply and the benefits of rehabilitation from that standpoint. The numbers I am going to give you are taken from our district records. We have released from storage for irrigation 135,000 acre feet of water per year, and have delivered to the farms 66,000 acre feet per year. This represents a loss in transit of over one-half of the amount released.

Compared to modern irrigation projects being built by the Bureau of Reclamation, this is very poor performance. For design purposes, the Bureau is understood to estimate or project lateral seepage and operations losses at 35 percent of gross diversions. We would expect our rehabilitated project to approach this level of performance. It can thus be seen that the proposed plan has the capability of salvaging about 20,000 acre feet per year. This would certainly qualify our project for a water conservation project whether the salvaged water was used for increasing the adequacy of irrigation water supply or made available for other purposes.

The next subject I would like to discuss briefly is the operation and maintenance costs. Under our present contract with the Bureau of Reclamation, we are obligated to levy O&M charges against our lands on a uniform basis, irrespective of the land class that is involved. This year the O&M levy is $10 per acre. Over the past 3 years the average levy has been roughly $8.70 per acre. We understand this is how the Bureau projects O&M costs for planning purposes, and for our purposes here today we would make the same assumption, although commonsense argues that there will be some continued inflation in this item. The thing that is hard to project is how much savings we can expect from O&M after the project is rehabilitated. We assume a savings of perhaps 20 percent in such costs, and this allows us to project before inflation a significant amount of our present O&M assessment to be available for repayment.

Indeed we hope that when final studies are completed we might be able to attain repayment before inflation of something on the order of 25 to 30 percent of all outstanding construction cost. Compared to other general agricultural irrigation projects in this part of the country, we would be considered outstanding. Moreover, our data does not take into account any indexing of payment capacity on account of increases in price levels, nor does it take into account any additional payment capacity that would be generated by salvaged water, so we believe that when all these things are considered, if Congress cannot see its way to pass our proposed legislation, it would be about the same as saying that they never intend to authorize any more projects for you simply are not going to find a better one.

Mr. Chairman, I would like to discuss with the subcommittee a matter which has arisen since the time of the field hearings. Representatives of large private energy firms have appeared in our community and have discussed with individual water users and the board of directors the possibility of obtaining some of the Belle Fourche water supply for their business, perhaps to operate coal slurry pipelines or otherwise use it in the processing of coal to usable energy forms.

At this time, no firm proposals have been presented to the board and we are not at all certain that such firm proposals will be forthcoming in the near future. Be that as it may, the board believes that such transactions should not be foreclosed in the future, and endorses legislative language that would provide authority to the Secretary of the Interior to adjust existing and future contracts in such manner as to facilitate any such transactions.

We further believe that any proceeds from the conversion of Belle Fourche project water supply to energy or industrial use should be used to offset the cost of construction and rehabilitation that may have been accrued by the United States, and we do not seek to use any such income as a means of avoiding our legitimate repayment obligations as otherwise spelled out in the bill.

In closing, Mr. Chairman, I would like to introduce into the record a brochure entitled, "New Life for a Granddaddy of Bureau Projects," provided by the Tri-State National Bank and incooperation with the "Daily Post," both of Belle Fourch. This borchure contains information valuable in explaining the importance of reauthorization of the Belle Fourche irrigation project in the Pick-Sloan program.

We thank you for holding the hearings and appreciate the opportunity to make these comments.

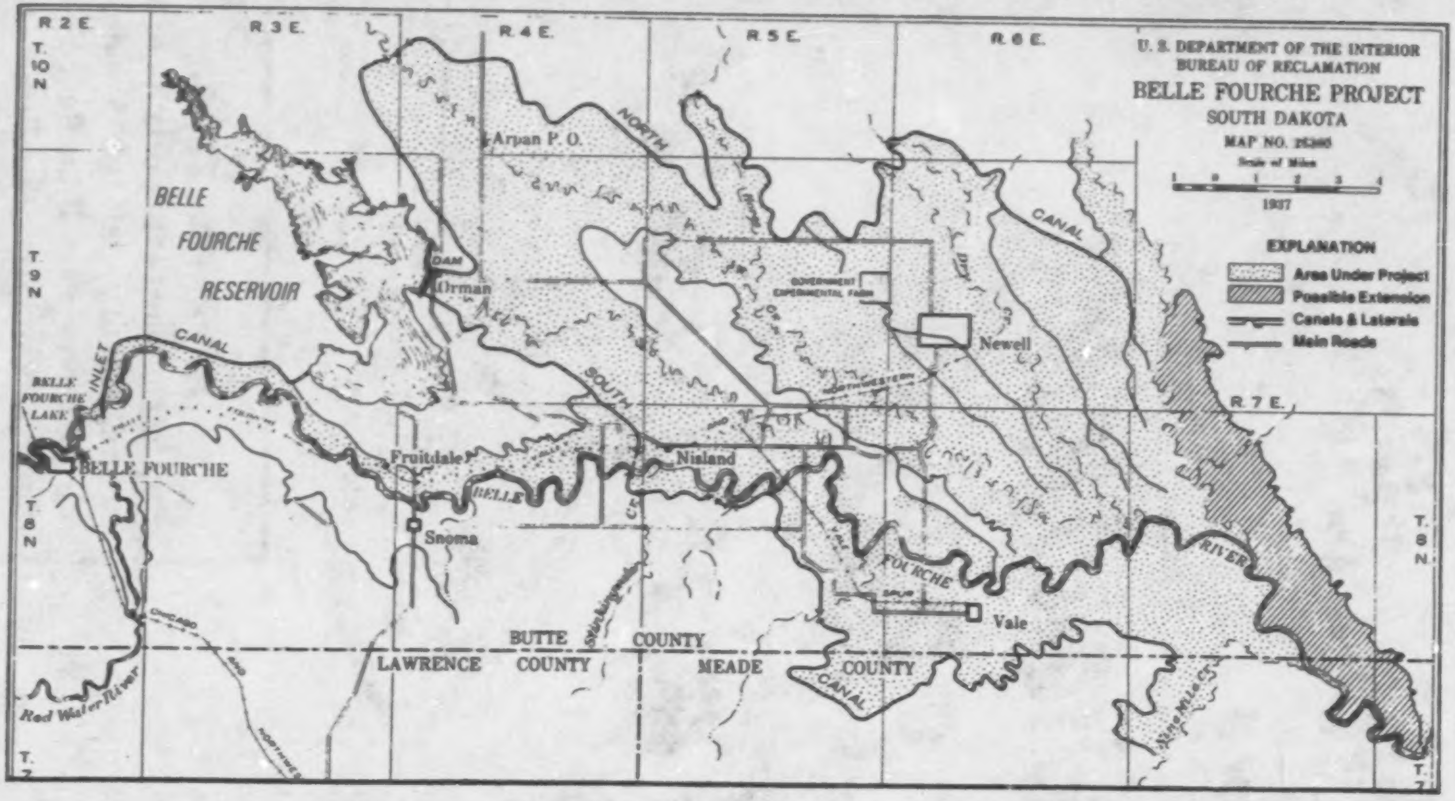
[The brochure submitted by Mr. Donaldson follows:]

New Life
for a
Granddaddy of Bureau Project

Re-authorization

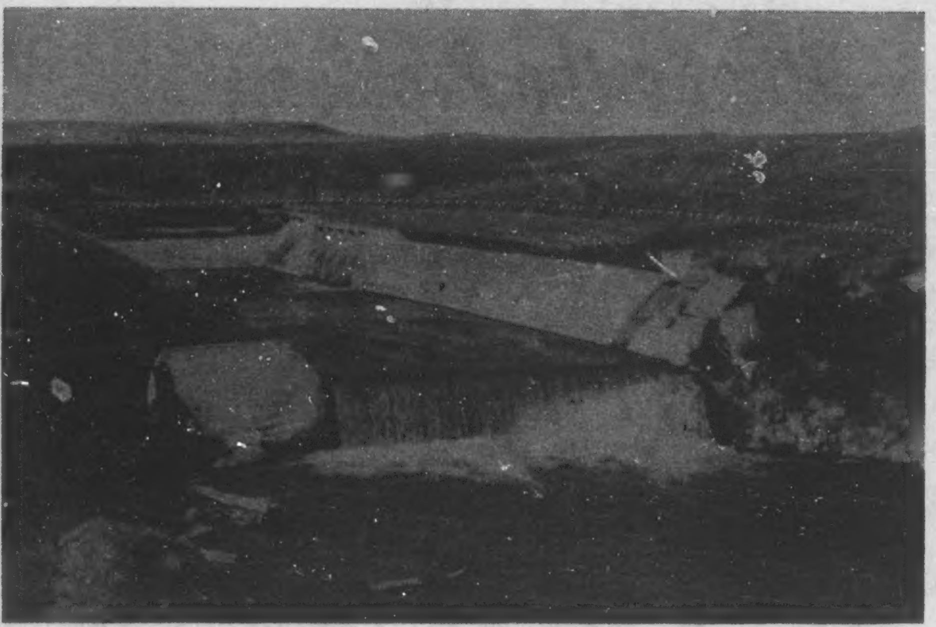
Explaining the importance of a proposal to update the 75 year old distribution system of the Belle Fourche (South Dakota) Irrigation Project to gain more efficient use of precious water in this semi-arid region.

On the Belle Fourche River in Western South Dakota



24 Miles Long, 12 Miles Wide, 94 Miles of Canals, 400 Miles of Laterals

BEST COPY AVAILABLE



INLET — Water flows into Belle Fourche reservoir from inlet canal. 78 years of service are evident.

ABOUT ORMAN DAM, the Belle Fourche Reservoir and the Belle Fourche Irrigation Project.

Orman dam construction began in 1906. Original cost was $4,230,000. The reservoir covers 8451 acres, stores 185,170 acre feet of water, has 52 miles of shoreline and irrigates 57,000 acres.

Belle Fourche project was the second of its kind undertaken by the Bureau of Reclamation. The project is located in western South Dakota, just north of the Black Hills, 35 miles from Montana and 25 miles from Wyoming.

Although the distribution system needs updating, the dam and reservoir are in satisfactory condition following a $2,800,000 program that provided a new spillway and new rip-rap for the face of the dam, as well as restoring 24,000 acre feet of storage.

Supplemental water is provided by Keyhole reservoir, 60 miles up the Belle Fourche river in Wyoming.

What's the Problem?

DIVERSION DAM — Deteriorating condition of diversion dam indicates need for rehabilitation.

It is time to update

94 miles of canals

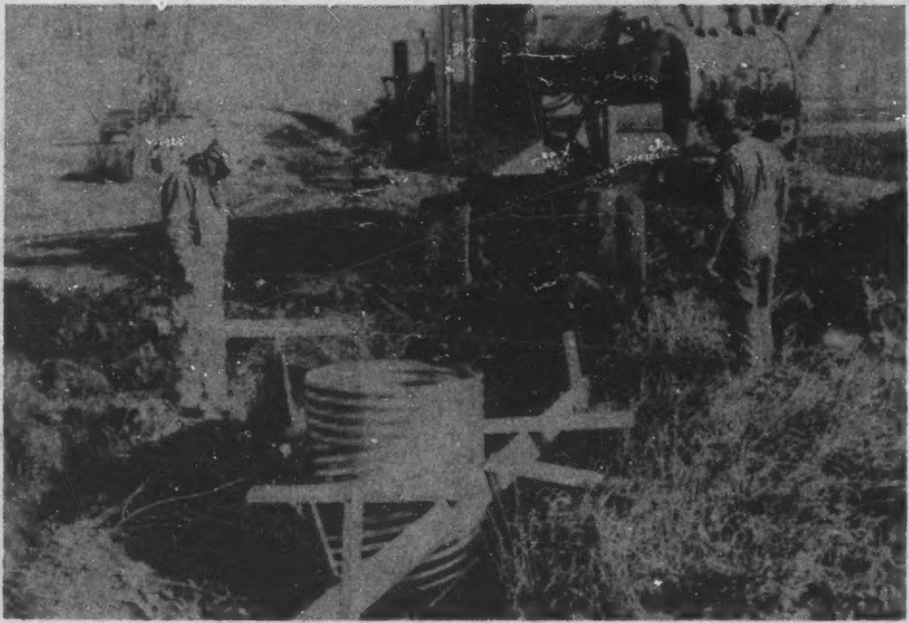
400 miles of laterals

252 miles of drains

All have served far beyond their intended life.

All are now obsolete.

ALL SHOULD BE REPLACED!



UPDATING — In an effort to improve water distribution, district is installing lateral lines underground. It saves precious water and minimizes surface disturbance.

We're losing the water!

Only a part of the water stored in the reservoir ever reaches the crops, much of it lost because of a deteriorated distribution system.

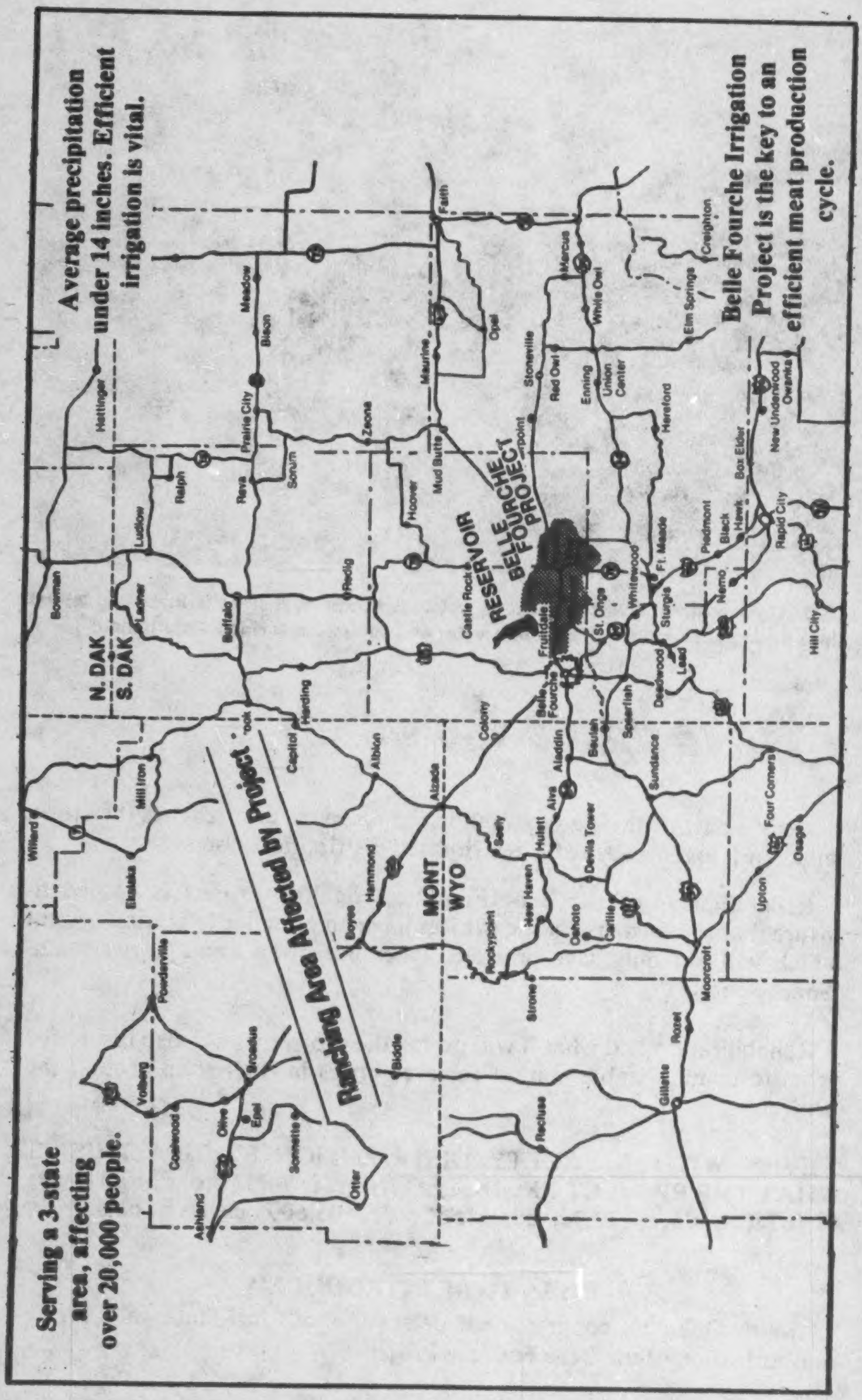
Rehabilitation of the Belle Fourche Irrigation project is needed to insure that the farmers on the project have an effective irrigation system which will not only save precious water but bring about lower maintenance costs.

Rehabilitation and what it will do for the project would also insure for years to come a stable market for area crops in the region around the project.

EVEN WITH A FAULTY DISTRIBUTION SYSTEM THIS IS WHAT THE PROJECT PRODUCED IN 1982: 74,325 tons alfalfa hay; 46,167 tons silage; 722,900 bushels of corn; 105,600 bushels of oats.

BILLS TO BE INTRODUCED

South Dakota's congressional delegation will introduce bills for reauthorization of the Belle Fourche Project.


Average precipitation under 14 inches. Efficient irrigation is vital.

Belle Fourche Irrigation Project is the key to an efficient meat production cycle.

Serving a 3-state area, affecting over 20,000 people.

Ranching Area Affected by Project

BEST COPY AVAILABLE

Vital to Area Economy

Reauthorization of the project to improve the water distribution system will help to insure a stable economy for the Tri-State area of western South Dakota, northeastern Wyoming and southeastern Montana.

Cost of rehabilitation of the project under the Missouri Basin Pick-Sloan program will be a small percentage of the cost of building a new project of comparable size since the distribution system is already in place.

Cost of rehabilitation is minimal compared to the returns which the project brings to the area.

Once a concentration of small farms, the project has become the key part of a meat production cycle that affects a 10,000 square mile area.

Project crops are used as livestock feed for the thousands of cattle and sheep that are raised in the surrounding area. Without the project feed would have to be hauled hundreds of miles or the livestock would have to be moved.

This involves cattle worth over $110,000,000 and sheep worth over $14,000,000.

Thus, a 57,000 acre irrigation project plays a vital part in a livestock industry worth over $124,000,000 and the effectiveness of this project now depends on a 78 year old system that needs a $42,000,000 face lift.

Galvanized metal flume shows its age

Senator NICKLES. Thank you very much, Mr. Donaldson. A couple of questions—I might ask you, you talked about the recapturing some of the salvaged water.

Did you say in your statement you would have no objection for the sale of that salvaged water to be applied toward the early retirement of the Federal debt?

Mr. DONALDSON. No, no objections.

Senator NICKLES. Is it within the State law to sell that water to industry?

Mr. DONALDSON. The irrigation district under State law, the State would have to negotiate those contracts, and I think Mr. Neufeld could help there.

Senator NICKLES. Mr. Neufield, could you touch on that?

Mr. NEUFELD. As you probably are well aware, Mr. Chairman, it is within South Dakota's State law to allow the sale of water for any industrial use. The State has done so itself. It is also allowable within State law for the U.S. Government to recover its costs in providing that water to the sale to an energy industry use.

Senator NICKLES. I see a picture in the borchure that you mentioned, this "New Life a Granddaddy of Bureau Projects," and it shows the project, I guess a galvanized metal tube.

Is this the primary method of transportation of the main canal?

Mr. DONALDSON. No. This would be of a lateral off the main canal.

Senator NICKLES. The main canal would be a ditch?

Mr. DONALDSON. The main canal does have two very large steel siphons on it. Oh, it keeps rusting out, though, and eventually it is going to just wear completely out.

Senator NICKLES. Mr. Casey, are you wanting to say anything?

Mr. CASEY. If I may, Mr. Chairman, I would like to comment on your question about the attitude of preference power customers toward use of their money, as it were, for assistance to the irrigation project.

The rates they pay are based on studies that are made that shows money from all sources being returned to pay all reimbursable costs. This includes commercial power as well as irrigation and certain other water use costs.

Now if you don't use any of this revenue to aid irrigation and you use all of that revenue to repay power and all of your power costs are interest bearing, and in order to pay off power within the statutory time period, you have to raise the rates, so the ultimate preference customer gets a better shake by virtue of this marriage between irrigation repayment and power repayment, and that is why, as Mr. Neufeld said, any number of preference customer organizations support the concept of subsidizing irrigation with power revenues.

Now that should hopelessly confuse everybody.

Senator NICKLES. I follow your comments, and I appreciate it.

Mr. Donaldson, correct me if I'm wrong, but in most irrigation districts throughout the United States, aren't those districts responsible for their own operation and maintenance expense?

Mr. DONALDSON. Yes.

Senator NICKLES. If we pass this, are we going to see irrigation districts throughout the country coming up and saying, we have a serious problem and we would want for the Federal Government to help rehabilitate or restructure or expand our project substantially?

Mr. DONALDSON. Mr. Casey would like to comment on that.

Mr. CASEY. Well, you certainly are justified in suspecting that might happen, but I feel that probably it would not, Mr. Chairman, for the simple reason that most of the projects are built since World War II. They are built to higher standards. They have been maintained at higher standards, and we simply don't have that many of these old 75- and 80-year-old pre-World War I projects.

This is not to say that there might not be another one out there that fell in the same category as Belle Fourche, but there is not a lot of them.

Senator NICKLES. Does your contract with the Bureau specify that you will pick up all maintenance and operation costs?

Mr. DONALDSON. Yes. The 1947 contract was changed, I believe, in 1970 or 1971 and the district is able to assess all the lands now, all classes of land for O&M where originally there was some O&M cost that was through the 1949 contract.

Senator NICKLES. Was the district negligent in this span of 70 years in not adequately assessing for maintenance expense to stop this enormous amount of waste?

Mr. DONALDSON. I don't believe negligent. I believe that the board through the years assessed what they thought was adequate to take care of O&M each year as it arose, and of course, as I stated in my testimony, they took care of just the pressing matters.

Senator NICKLES. You mentioned what—a $10 per acre O&M?

Mr. DONALDSON. Yes.

Senator NICKLES. You have how many acres under the district?

Mr. DONALDSON. 57,100.

Senator NICKLES. And so you have an assessment for O&M of what—570,000?

Mr. DONALDSON. Approximately.

Senator NICKLES. And yet that is not near adequate, I guess. Is the water loss increasing substantially every year? Is it on that type of scale? The system is deteriorating and the loss is being that much larger?

Mr. DONALDSON. No. I think we are fairly stabilized now. I would say I haven't been on the board all that long, but since I have been on there, they have been right around 48- and 49-percent delivery of what has been turned out of the reservoir, and it has been staying that way for quite some time.

Senator NICKLES. You have been losing about half your water for a good many years, the last 20 years?

Mr. DONALDSON. Oh, I would say the last 15, anyway.

Senator NICKLES. How do you respond to a question if a Senator was to ask why should the taxpayers and utility customers pay for the rehabilitation of this project where the users are supposed to pay for it in the balance of the rest of the projects?

Mr. DONALDSON. I believe that I would say that the real direct beneficiaries of rehabilitating this project and using the power revenues are those same people that use power revenues. We have been able to provide, the American farmer has for many years, very low-cost food for this same taxpayer, and if our project disappears and eventually will be inoperable, then I would say those same taxpayers are going to realize the very high cost for their food from somewhere.

Senator NICKLES. Do you want to respond to that?

Mr. NEUFELD. I was going to ask, if I could, if you hadn't offered.

Senator NICKLES. I saw you getting ready to jump in.

Mr. NEUFELD. Mr. Chairman, as a result of the mainstem dams, that Missouri River flood damage is in excess of $1.6 billion and voided downstream.

Senator NICKLES. Wait a minute. Would you say that again?

Mr. NEUFELD. As a result of the six mainstem dams that have been built on the Missouri River, flood damage is in excess of $1.6 billion. That has been voided downstream from the last dam on the river. Those have been benefits that have largely accrued to States other than South Dakota and the rest of the country. Navigation is a nonreimbursable expense.

Power has gone out and subsidized lower than market rates to people other than the State of South Dakota. We have lost the most productive——

Senator NICKLES. I am not talking about the overall plan. I was talking about primarily as far as rehabilitation of the Belle Fourche project.

Mr. NEUFELD. My point is that from the standpoint of the State as a whole, we have lost some of the most productive farmlands in the State which stabilizes our livestock economy, and 70 percent of our agriculture receipts has been from livestock sales, Mr. Chairman.

We feel that in South Dakota we have been for the last 20 to 30 years subsidizing the rest of the Nation in the Missouri basin particularly, and feel we simply that turnabout is only fair play, and the commitment to the State be kept, and that is our answer to the question.

Senator NICKLES. To get a little more specific, the commitment to the States, if you do have a contract that says that the Belle Fourche project would be responsible for O&M, now aren't you kind of coming back and saying we want the Federal Government to be responsible for the fact that we have lost that?

Mr. NEUFELD. You are talking about the particulars of the Belle Fourche project, and we can argue those all day, Mr. Chairman. I am trying to stay on the level of whether or not the State of South Dakota can be made whole in this bargain.

To us, the Belle Fourche, the rehabilitation of the Belle Fourche project is as good a way to keep the bargain as any other type of project in the State. It would be a good start.

Senator NICKLES. I still see a contract that says you are supposed to take care—I am thinking, too, that we may have several other irrigation districts. We have one in my State and in others, but if you have a contract that says the irrigation district is responsible for operation and maintenance and now you come back to the Congress and say wait a minute, we have not kept up with our maintenance and now we have a great deal of water that is being lost so we want the Federal Government to come in and have the taxpayers and utility payers and the taxpayers are another element in this because it is interest-free money, to greatly pay for this project which is contrary to the contract that you have with the irrigation district.

I am just throwing the question out. It is going to be asked again I'm sure to other people and I wanted to give you a chance to respond.

Mr. CASEY. May I try, sir?

Senator NICKLES. Certainly.

Mr. CASEY. Well, it is a troubling question. Mr. Donaldson's statement very candidly says it is a question that can fairly be asked.

Now in the midforties there was a general law passed called the Rehabilitation and Betterment Act, and under that act an irrigation district can devise a plan for rehabilitating and upgrading its project, and come to the Secretary, get a good contract and sign it, and send it up here and let it lay before your committee and the companion committee in the other body for a period of time, and then budget that work and spend that money and keep their project in first-class condition.

Now that Belle Fourche project was almost 50 years old before that vehicle for rehabilitation became available, and that is one of the reasons that my hope that the project in your State—and I assume you are referring to the W. C. Austin project which was built around World War II. It has has access to the Rehabilitation and Betterment Act, but whether it has used it or not I couldn't say. I could check and find out. It has been available to them and they could use it and within their payment capacity keep their project almost as good as it was when it was brand new, but this project, Belle Fourche project, was over 40 years old before that vehicle became available, and in that incurred so much degradation, physical degradation by then that there had been no time that rehabilitation and betterment contract would have put this project on its feet, and that is equally true today.

Senator NICKLES. One additional question—our of the $42 million, do you know what the breakdown would be as far as what percent would be repaid by power and what percent would be borne by the district?

Mr. NEUFELD. Mr. Chairman, I believe Mr. Broadbent's testimony uses the figure $30 million as being the power repayment.

Senator NICKLES. Is that correct?

Mr. NEUFELD. I have no basis for challenging that.

Mr. CASEY. That's a ball park figure for sure.

Senator NICKLES. Senator McClure, we welcome you before the committee.

Did you have any comments or questions?

The CHAIRMAN. Thank you very much, Mr. Chairman. I just want to commend you for holding these hearings and giving the people an opportunity to testify who have an interest in this.

I have a statement which I will ask be made a part of the record.

Senator NICKLES. It was made a part of the record prior to the panels.

Thank you very much.

Senator Hecht, do you have any questions?

Senator HECHT. No.

Senator NICKLES. Gentlemen, thank you very much, and we will be keeping the record open for a couple of weeks and there may be additional questions from myself or other members of the subcommittee.

Mr. **Neufeld**. Mr. Chairman, I have one comment on another topic that is up before the committee today on safety dams legislation, and rather than come back and ask for additional time, it deals with design criteria for dams.

We have in our State engaged in a study to look at extending the Garrison projects in North Dakota into South Dakota using the James River drainage as a conduit for that water. We have engaged in a cooperative effort with the Bureau of Reclamation to try and design dams on tributaries to the James River, and we have come to the conclusion that some of the design standards that are being used, and I don't know if this is relevant to this legislation, but I think it is something that should be brought to the committee's attention, in my mind go beyond the commonsense called for.

The dams are required to be designed in the Federal standard to something called the probable maximum flood which is essentially that flood which has zero chance, zero probability of occurring.

Senator **Nickles**. All Federal dams?

Mr. **Neufeld**. Yes. To my knowledge, not one Bureau of Reclamation dam has ever failed because of inability to handle a flood or inadequate design, inadequately designed spill, and I think the same way may be true for Crops of Engineer's structures also.

One of the tributaries to the James River, for instance, which in 55 years of records has a highest reported flow of 15,200 cubic feet per second, we are required to design a dam to hold back a flood designed for 213,000 cubic feet per second, which is 14 times essentially the highest reported flow in the James River and nearly half the highest reported flow ever on the Missouri River, the mainstem dam in Sioux City, Iowa, resulting. The increasing cost and construction of this dam over a spill rate that would handle a 100-year flood rather than probable maximum flood is 26 million. The cost of the entire structure would increase from $29 million to $55 million.

We are not opposed to safe dams, but when you get to the point where you are increasing the design capacity of a dam by 14 times to withhold a flood that essentially has zero probability of ever occurring, we think you have gone beyond——

Senator **Nickles**. How long has that been required?

Mr. **Neufeld**. I think it is just in the last few years, 1978 I believe, and it is an administrative requirement. I don't believe it is in the statute.

Wyoming has run into this problem with the Buffalo Bill Dam. They thought they had a deal with the Bureau of Reclamation and now the design standards have come back and they have to increase the cost because of the flood design, and it is improper.

Our point is that if you design to 200, 300, or even 400 year floods, that ought to be safe enough. If anything occurs over that, there ought to be plenty of time for other warning mechanisms to take effect. Those kinds of floods don't occur in 30 seconds or an hour. They occur over several days of rainfall and there ought to be plenty of time to initiate other types of precautions such as evacuation procedures or something like that. We shouldn't have to spend capital and dollars in this kind of design.

Senator **Nickles**. I appreciate your bringing that to the attention of the subcommittee. Thank you very much.

[Subsequent to the hearing Mr. Neufeld submitted the following:]

SOUTH DAKOTA Department of
Water & Natural Resources
Joe Foss Building
Pierre, South Dakota 57501

April 4, 1983

Senator Don Nickles, Chairman
Water Power Subcommittee of the
Energy and Natural Resources Committee
United States Senate
A-420 Immigration Building
Washington, D.C. 20510

Dear Chairman Nickles:

Thank you very much for the opportunity to testify on behalf of S448 (reauthorization of the Belle Fourche project as a unit of Pick-Sloan, Missouri Basin program) on March 24, 1983. During my oral testimony I referred to three items which were not included in my written presentation. The first related to the concurrence of preference power customers in the use of Pick-Sloan Missouri Basin project power and power revenues in the construction of water projects. Enclosed please find a copy of a letter dated June 18, 1982, from Loren Zingmark, General Manager of East River Electric Power Cooprative stating that entity's support for the use of Pick-Sloan power in the development of water projects. Also enclosed is a brochure from the Mid-West Electric Consumers Association, Inc., an organization of preference power customers, which states that organization's position on behalf of its members in favor of utilizing power revenues for the development of reclamation projects.

The second item not in my written testimony that was brought to the Committee's attention regarded the provision of Pick-Sloan power to reclamation projects in other states without specific Congressional authority. Only one project in South Dakota is currently receiving Pick-Sloan power, the Grass Rope Unit, and that is being done pursuant to specific Congressional authorization in the form of S1553/HR4347 which passed Congress during the last session. South Dakota is very puzzled that other water projects are receiving low cost power through the apparent authority of administrative decisions made long ago while we are unable to get the same kind of treatment except through an act of Congress. Our information shows that the following projects are receiving

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WNR-101-9/79

Page 2
Senator Don Nickles
April 4, 1983

Pick-Sloan power in the corresponding amounts:

1.	Sidney Pumping Project, Montana	1,500KW
2.	Buffalo Rapid Irrigation Dist.#1, Montana	3,500KW
3.	Buffalo Rapid Irrigation Dist.#2, Montana	2,200KW
4.	Buford-Trenton Irrigation Dist., North Dakota	700KW
5.	Intake Irrigation District, Montana	50KW
6.	Lower Yellowstone Irrigation Dist.#1 and #2, North Dakota & Montana	300KW
7.	Three-mile Pumping Project, Montana	60KW
8.	US Indian Service-Ft. Peck, Montana	2,400KW
9.	Kinsey Irrigation Company, Montana	750KW
10.	Malta (Dodson) Project, Montana	100KW
		11,560KW

Finally, I also commented on a matter relating to dam safety. As you will recall I had some specific complaints about the apparently arbitrary requirement of the Bureau of Reclamation and its engineering and research center in Denver that Federal dams include spillways or capacity sufficient to handle what is known as a probable maximum flood. Enclosed please find a memorandum to me from one of my staff relating our experience in one region of the state with dam design utilizing the probable maximum flood standard. Please note the tremendous increase in cost caused by using this standard as opposed to designing dams capable of handling a 100 year flood event. I am not advocating that the 100 year flood event be used as a standard for dam design, but I do believe that substantial cost savings can result by utilizing something other than the probable maximum flood standard. After all, not one Bureau of Reclamation dam has ever failed because of inadequate spillway design.

Sincerely,

Bob Neufeld

Warren R. Neufeld
Secretary

WRN/cj

Enclosure

East River
ELECTRIC POWER COOPERATIVE, INC.
MADISON, SOUTH DAKOTA 57042
PHONE: 605 256-4536
LOREN ZINGMARK, GEN. MGR.

June 18, 1982

Senator James Abdnor
4327 Dirksen Senate Office Bldg.
Washington, DC 20510

Dear Jim:

This letter is a follow up to a conversation which I and members of my staff had with Owen Ambur of your staff earlier this week concerning HR 4347. I wanted to send this letter to confirm our position on the bill and offer my thanks to Owen for his very helpful insight on it.

As we advised Owen, we support the concepts of HR 4347 seeking to 'claim' Federal support for South Dakota water development. We were pleased that Congressmen Daschle and Roberts successfully negotiated it through the House of Representatives. We were surprised, however, to learn that the final version passed by the House has some damaging language to South Dakota.

As I am sure Owen has told you, our concern centers on Section 5 of the House-passed version of the bill which would allow irrigation pumping power to be made available from the Pick-Sloan Missouri Basin Program at the Secretary of Interior's discretion at the request of the Governor. We have consistently supported and continue to do so, the reservation for South Dakota of irrigation pumping power promised for federal project in South Dakota under the Pick-Sloan Plan. If those projects are not developed then we strongly believe that this or similar legislation should preserve that irrigation pumping power for use in other South Dakota projects, whether they would be developed federally or otherwise.

However, at least one legal opinion that we have had on Section 5 of the House reported bill is that it actually may do much more than it was intended to do. We have been advised by reputable legal counsel that the way Section 5 is now written, it is likely that states far removed from the Missouri Basin such as in California, could, under this language be entitled to receive pumping power from the Missouri Basin program. At a minimum it would allow all Missouri Basin states new authority to request power for non-federal projects. I understand Owen to agree with our contention that this would not be in the best interests of South Dakota and that both your office and the Senate staff had previously recognized this potential problem. We wholeheartedly concur with what

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Owen described to us as an effort to make the language in Section 5 of the bill more limiting so that only South Dakota projects which would be developed in lieu of Pick-Sloan authorized federal projects (such as CENDAK) would be entitled to receive, at the request of the Governor, power for irrigation pumping purposes from the Pick-Sloan Missouri Basin Program.

Power interests in this basin have long recognized that a part of the water and power partnership entitles projects authorized by the Pick-Sloan plan to receive irrigation pumping power as part of that development. Specifically, East River has on many occasions reaffirmed our commitment to preserving that pumping energy allocated to federal reclamation projects for South Dakota use in the event that federal projects are not developed. We oppose any legislative authority to allow out-of-basin interests to receive what is the rightful entitlement of irrigation pumping from Pick-Sloan for South Dakota projects.

We offer to work with you as this bill is considered in the Senate to insure that the rightful claim on this pumping power is retained by South Dakota interests. We do not want to see this entitlement lost. We are pleased that Owen reported to us the recognition that had already existed on the need for a change of this section by your office as well as by the staff of the Senate Energy and Natural Resources.

We appreciate the forthright working relationship that we enjoy with you and members of your staff, Jim, and stand ready to continue to assist you on legislation such as this for the best interests of South Dakota.

Sincerely,

Loren A. Zingmark
General Manager

LAZ/JLR/dl

cc: Senator Pressler
Representative Daschle
Representative Roberts
Governor Wm. Janklow

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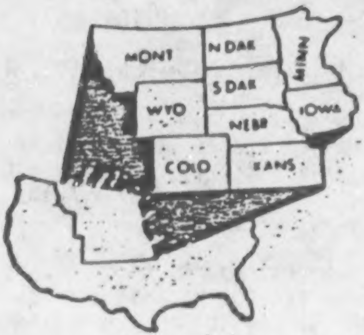

POLICIES AND RESOLUTIONS FOR 1983

MID-WEST ELECTRIC
Consumers Association, Inc.
P.O. BOX 910
EXECUTIVE OFFICE BUILDING
EVERGREEN, COLORADO 80439
PHONE (303) 674-6675

RESOLUTION N

INTERIOR DEPARTMENT AUDIT REPORT

WHEREAS, the United States Department of the Interior issued the audit report, titled, "Review of Repayment Status of Pick-Sloan Missouri Basin Program and Individually Authorized Projects, Bureau of Reclamation", July, 1979; and

WHEREAS, the subject report, recommending complete reassessment of repayment criteria for the Pick-Sloan Missouri Basin Program (PSMBP), constitutes one of the most unbusinesslike and unfair proposals ever made in connection with the program; and

WHEREAS, the subject report seeks to change the "Ultimate Development Concept" presently employed as the basis for assessing the financial position, as well as for determining water and power rates for the PSMBP; and

WHEREAS, the report seeks to place the PSMBP on a "Current Development Concept" which would (1) alter cost allocations which were originally required and established prior to the start of construction of the PSMBP, and (2) result in destroying those features of the project repayment plan which were fundamental to project beneficiaries in reaching their original decision to support development, and to contract for benefits and repayment of reimbursable costs; and

WHEREAS, subject report establishes "Current Development Concept" as being a period of five years; and which Mid-West Electric Consumers Association (Mid-West) believes would result in fluctuating power cost resulting from water conditions instability affecting energy supply; rendering both short and long range planning near impossible; and

WHEREAS, records indicate that about 25 years of below average and about 25 years of above average water storage can be anticipated for Missouri Basin reservoirs, and Mid-West supports power rates being geared to such "average conditions" as now practiced for the PSMBP; rather than being changed to "Current Concept" as suggested by the report; and

WHEREAS, shifting of planning irrigation development whether authorized or not, from the present "Ultimate Development Concept" to the proposed "Current Development Concept" prompts a number of allocation questions which could unfairly trigger rate increases; and

WHEREAS, the original feasibility of the PSMBP was passed upon by the Congress; and subsequent payout reports of the Bureau of Reclamation demonstrate the project is financially sound and meeting repayment obligation; and

WHEREAS, project cost allocations were established by the Congress and recent legislation establishing the Department of Energy specifically precludes changes in cost allocation at Reclamation projects without Congressional approval. It states in pertinent part:

> "Sec. 302 (a) (3)
>
> ... Neither the transfer ... (power marketing functions of the Bureau of Reclamation) nor any changes in cost allocation of project evaluation standards shall be deemed to authorize the reallocation of joint costs of multipurpose facilities theretofore allocated unless and to the extent that such change is hereafter approved by the Congress.";

and

WHEREAS, power consumers relied on original cost allocations to plan their systems, and to make large investments in power facilities; and any increase in the cost allocation for power or shifting of the irrigation cost allocation to a current concept to be repaid concurrently or otherwise, will result in greatly increased power costs working serious financial hardship on the preference customer;

NOW, THEREFORE, BE IT RESOLVED, that Mid-West believes any change in present PSMBP cost allocations concerning irrigation or power will have the widespread impact of virtually destroying the basin-wide concept of development; will clearly increase the cost allocation to power and thereby greatly increase wholesale power rates; will destroy the motive of low-cost power; will * endanger any future consideration by succeeding administrations of the 3 million acres of undeveloped irrigation potential of the PSMBP; and

BE IT FURTHER RESOLVED, that the members of Mid-West because of the irreparable economic harm to the preference customer and the long-term detrimental social impact in the 10-state Missouri Basin development, vigorously opposes any reallocation of costs; or any change from the present "Ultimate Development Concept" to "Current Development Concept" for the Pick-Sloan Missouri Basin Project.

RESOLUTION 14

PICK SLOAN BENEFITS

WHEREAS, the states of the upper Missouri Basin agreed to permanently flood over 1.6 million acres of productive land in order to eliminate major downstream flooding in return for the promise of future major water development, all of which was authorized by Congress as the 1944 Flood Control Act which was later renamed the Pick-Sloan Missouri Basin Program; and

WHEREAS, over $1.5 billion in downstream damages and immeasurable human tragedy has been averted by the permanent flooding resulting from the construction of the six mainstem dams on the Missouri River in Montana, North Dakota and South Dakota; and

WHEREAS, of the approximately 3.6 million acres of Federal irrigation development promised in these three upstream states only about 109,000 acres or 3% have been developed; and

WHEREAS, two of the major projects promised, namely, the Garrison Project in North Dakota and the Oahe Project (parts of which are included in the CENDAK project) in South Dakota, continue to be attacked as 'pork barrel' projects; and

WHEREAS, Mid-West Electric Consumers Association (Mid-West) recognizes the Federal commitments made and the continuing dire need for Federal water development in the upper Missouri Basin states;

NOW, THEREFORE BE IT RESOLVED, that Mid-West calls upon the Congress and the President and his Administration to honor the commitment to the upper Missouri Basin states by offering and supporting required Federal authorizations and appropriations for the development of those projects promised as part of the 1944 Flood Control Act; and

BE IT FURTHER RESOLVED, that specifically Mid-West supports continued funding and development of the Garrison Project in North Dakota and accelerated authorization and funding of the CENDAK Project (which would utilize key features of the Oahe Project) in South Dakota.

RESOLUTION 22

SUPPORTING "ULTIMATE DEVELOPMENT"

WHEREAS, hydroelectric power development has been an important element of the federal reclamation program since its beginning; and

WHEREAS, the importance of reclamation hydroelectric development comes from the fact that it provides a relatively low cost, renewable source of energy that contributes to the economic development of agriculture, irrigated and non-irrigated, and of the industry and commerce of the cities and towns throughout mid-western and western America while at the same time providing essential financial assistance in returning to the federal treasury costs of constructing irrigation works that are not repaid by the water users; and

WHEREAS, realizing the interdependency of power users and water users in the continuation of a sound federal reclamation program; and

WHEREAS, Congress, in authorizing and continuing to fund such large scale multi-purpose federal reclamation projects as the Pick-Sloan Missouri River Basin Program, the Columbia Basin Project, the Central Valley Project, the Colorado River Storage Project and the Central Arizona Project, did so on the basis that power rates would be set at levels which would, in fact, enable showing through repayment studies that power revenues would be available to meet the irrigation costs to be repaid by power revenues; and

WHEREAS, knowing that to make such showing the repayment studies, upon the basis of which power rates are established, must include the estimated costs of authorized irrigation features to be undertaken in the future; and that multi-purpose costs of constructed reservoirs, power plants and other features must be allocated on that basis, a concept known as the "ultimate development concept"; and

WHEREAS, the abandonment of the ultimate development concept will undermine Congressional support for both further irrigation and hydroelectric power development under the federal reclamation laws;

NOW, THEREFORE, BE IT RESOLVED, that Mid-West Electric Consumers Association:

1. Reiterates its support for the ultimate development concept;

2. Will continue to vigorously oppose attacks on that concept;

3. Commends members of Congress from the Missouri Basin area and elsewhere on taking the lead in defeating the so-called Erlenborn Amendment to the Reclamation Modernization Act which had as one of its objectives the crippling of the federal reclamation programs by forcing termination of the ultimate development concept.

MEMORANDUM

TO: Bob Neufeld

FROM: Ron Lutz

SUBJECT: PMF (Probable Maximum Flood)

DATE: March 23, 1983

The definition of a Probable Maximum Flood is the largest possible flood that could be expected to occur within the identified watershed.

To give you an idea of the magnitude and cost of this design criteria, I have prepared a chart of design date calculated for various proposed dam sites in the James River Basin. The design and cost procedures have been approved by the Bureau of Reclamation. When reviewing the following chart, please keep in mind the highest flow ever recorded at the Scotland Gage, which is the last gage on the James River before its confluence with the Missouri River, is 15,200 CFS (cubic feet per second) and occured April 2, 1962. The period of record for this gage is from 1928. The greatest flow ever to occur in the Missouri River at the Sioux City gage is 441,000 CFS which occured April 14, 1952. The period of record for this gage is from 1897. Contributing drainage areas for Scotland and Sioux City are 21,550 square miles and 314,600 square miles respectively.

LOCATION		PMF	DRAINAGE AREA	COST W/100 yr	COST W/PMF
Tributory	Legal	(CFS)	contributing square miles	SPILLWAY ($)	SPILLWAY ($)
Elm (Westport)	T126NR63WS3&34	213,191	1680	29,000,000	55,000,000
Dry Branch	T127NR64WS30	53,271	107	11,000,000	16,000,000
Shue Creek	T112NR61WS1	80,045	178	13,000,000	16,000,000
Morris Creek	T104NR60WS28	63,897	119	9,500,000	16,500,000
Plano Cree	T104NR60WS36	63,192	100	13,000,000	18,500,000
Mud Creed	T120NR63WS23&24	163,711	470	34,500,000	53,000,000
Timber Creek	T116NR62WS33	105,922	343	21,500,000	36,000,000
Rock Creek	T103NR59WS7&8	70,938	230	21,000,000	27,500,000
Wolf Creek	T99NR57WS31	109,500	297	48,000,000	54,500,000

The U.S. B.R. in keeping with their dam safety inspections have also calculated a new PMF for Pactola Dam in the Black Hills. The new PMF for Pactola is 321,000 CFS. The cost to upgrade the structure to prevent failure of the structure is $10,000,000. The contributing drainage area is 319 square miles and the original "inflow design flood" was 69,000 CFS.

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Senator **Nickles**. Our next witness is Robert Broadbent, the Commissioner of the Bureau of Reclamation.

Commissioner, welcome to the committee. Please proceed.

Commissioner **Broadbent**. Mr. Chairman, should we start out with Belle Fourche?

Senator **Nickles**. I think that would probably be the desirable starting point, and I appreciate, too, your willingness to shift your schedule around so we can hear all of our witnesses together on Belle Fourche.

STATEMENT OF HON. ROBERT N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Commissioner **Broadbent**. Mr. Chairman and members of the committee, I am pleased to appear before you today testifying on Senate bill 448.

With the enactment of this legislation, the general plan of the existing Belle Fourche project, previously authorized for construction in 1904, would be modified and reauthorized as the Belle Fourche unit of the Pick-Sloan Missouri Basin program. Such reauthorization would allow surplus Pick-Sloan Missouri Basin program power revenues to be used for repaying costs assigned to irrigation that are above the ability of water users to pay.

If I might, Mr. Chairman, I have a longer statement. I would like to have it placed in the record, and maybe I can just speak a little bit off the record.

Senator **Nickles**. Certainly.

Commissioner **Broadbent**. The administration has taken a position in opposition to this bill, and I don't think it was an easy position for us to take. I think in my discussions with the Secretary and the administration we recognize the commitment that we feel the Government made to South Dakota when they built those mainstem dams.

I think our problem as an administration is that we have to look at the total picture, and the total picture is that in many of our irrigation projects the power revenues are supporting and helping to pay for those projects, not only in the Pick-Sloan Basin. That is true in many other parts of reclamation, and we support that and have supported it, but our problem is that if there is a rehabiliation and betterment program that begins to do this, it is a precedent we set in that program.

There are many projects that were built prior to World War II that are still operating, but as an administration with the fiscal constraints and problems we have, we aren't in a position to recommend the passage of this bill at this time.

At the same time we recognize that there is a commitment to South Dakota, and I think that the Senators themselves recognize that commitment. My secretary has spoken to that commitment on numerous times and numerous places as recently as 8:30 this morning in a meeting with some western Senators. It is not a comfortable position for us to be in, recognizing the commitment we have to South Dakota, but we also have a commitment to the Federal Government and the rest of the taxpayers. For this reason we're forced to come out in opposition to this bill.

If I could, I would be happy to anwer any questions you might have, and certainly our statement for the record gives a little more testimony.

[The prepared statement of Commissioner Broadbent on S. 448 follows:]

Statement of Robert N. Broadbent, Commissioner, Bureau of Reclamation of the Department of the Interior, Representing the Department, before the Senate Committee on Energy and Natural Resources, Subcommittee on Water and Power, on S. 448 to authorize rehabilitation of the Belle Fourche irrigation project and for other purposes.

March 24, 1983

Mr. Chairman and members of the subcommittee, I am pleased to appear here today to testify on S. 448.

With enactment of this legislation, the general plan of the existing Belle Fourche Project, previously authorized for construction in 1904, would be modified and reauthorized as the "Belle Fourche Unit" of the Pick-Sloan Missouri Basin Program. Such reauthorization would allow surplus Pick-Sloan Missouri Basin Program power revenues to be used for repaying costs assigned to irrigation that are above the water users' ability to pay.

The bill would authorize an appropriation of $42 million (January 1981 price levels), plus or minus amounts justified by reason of fluctuations in construction cost indexes for the types of construction involved. These expenditures would be made for construction activities associated with the development of new facilities and rehabilitation of existing works to provide water conservation, recreation, and fish and wildlife benefits.

We are opposed to this legislation because it is contrary to the Administration's policy of requiring that direct beneficiaries of Federal projects pay for the costs of the benefits they receive. We do not believe that this program would be in the best interests of the Federal taxpayer, nor should we require the power customers of the Pick-Sloan Missouri Basin Program to repay 70 percent or more of these rehabilitation and betterment costs.

Section 2 of the bill would require the Secretary of the Interior to negotiate a repayment contract which would fix the obligation to be repaid by the water users within 40 years from its execution. Our policy is to have an executed contract prior to construction with a repayment period running from the time that the project is substantially complete. However, the bill would reduce the time for the water users to repay project costs since repayment cannot begin until benefits accrue to the water users. This could result in a 30-year payback period if construction took 10 years. Our estimate shows that at least $30.3 million of future net power revenues would be required to assist in the repayment of the proposed work, exclusive of any miscellaneous revenues.

The majority of the expenditures under the bill would be assigned to irrigation. Under Reclamation law irrigation costs are interest-free except for excess landholders. The cost of the program would have to be financed through tax revenues and/or by public debt instruments. Such financing carries real interest costs for the general taxpayer and would not be returned by the local beneficiaries or power customers.

Mr. Chairman, thank you for the opportunity to appear before this subcommittee. I will be pleased to respond now to questions that you or other subcommittee members may have.

Senator NICKLES. I appreciate that. You heard my line of questioning that was going into the fact of the basic contracts. Most of the contracts—is it all the contracts—with the irrigation districts require that district to pay all of their operation and maintenance expense?

Commissioner BROADBENT. I think there are some that don't. I am told there are, but I think basically the recommendation of at least this administration, is that where there is a rehabilitation and betterment program it should be paid for by the recipients or by the people that benefit. Part of the R&B program is probably not due to faulty construction as much as it is in the changes in technology.

We built ditches that weren't lined. We didn't have pressure pipes. We didn't do a lot of other things that are possible to do today, and so in a lot of our R&B programs we are able to conserve water and to do a lot of other things that are important as we look at increasing water shortages and increasing water pollution. That is part of what the R&B program has been able to do. It is not so much a matter of poor maintenance as much as it is changes in the technology.

Senator NICKLES. Are there other projects like this one, if we saw this rehabilitation project funded, are there other projects that we would find that would be right behind it asking again the Federal Government to take care of their maintenance or rehabilitation?

Commissioner BROADBENT. I have no knowledge of any, Senator. I don't know of any R&B programs that are anticipating doing this kind of thing.

Now I am sure that anybody that has an R&B program, if they are aware of this, may figure that they can try, too.

Senator NICKLES. The cost breakdown, do you know how many of these, have you analyzed it to see how much of the cost would be borne by the utility consumers and how much would be borne by the irrigation users?

Commissioner BROADBENT. Our estimate is that about $30.3 million would be paid for out of power revenues, out of the $42 million project. Those are still estimates based on January 1981 price levels.

Senator NICKLES. And the cost would what, be paid back over 50 years?

Commissioner BROADBENT. Forty years.

Senator NICKLES. Zero interest?

Commissioner BROADBENT. Yes; irrigation is at zero interest; however, the power revenues not associated with irrigation would have an interest component in it.

Senator NICKLES. What is that current rate of interest?

Commissioner BROADBENT. The Pick-Sloan rate for power is 2½ to 3 percent depending upon the time each power function come on line.

Senator NICKLES. You mentioned the administration's policy requiring direct beneficiaries of Federal projects to pay for the cost of benefits they receive.

If you follow that criteria, would we have previously built Bureau projects? Would they be supported by the administration today?

Commissioner **Broadbent**. I think in general we are supporting the ultimate development, and ultimate development is that power revenues will be used to repay the cost of an irrigation project. We are supporting that today.

An example might be Garrison or any of the projects—the Colorado River storage project, many of them in the Pacific Northwest, some in the Boulder Canyon project area.

Senator **Nickles**. All of those are having power subsidies to the irrigation users?

Commissioner **Broadbent**. Yes, sir.

Senator **Nickles**. Do you see if this is funded that we would be, if we rehabilitated this project with Federal funds, this would be violating the contract that we have with the irrigation district for them to be responsible for their operation and maintenance expense?

Commissioner **Broadbent**. It would be a new contract. I don't think you would violate the old one, but certainly you would have to enter into a new one.

Senator **Nickles**. But it is in contrast to the existing contract?

Commissioner **Broadbent**. Yes, sir.

Senator **Nickles**. Senator McClure, did you have any questions of the Commissioner?

The **Chairman**. I do, because I want to try to understand what the point of departure is if I can because this is a point of departure from established policy or perhaps a refinement of established policy.

You have indicated that this administration has no objection to the merger of costs on irrigation projects upon an individual project basis or within a basin project?

Commissioner **Broadbent**. Previously authorized.

The **Chairman**. Well, even ones that might be authorized now or in the future, if there were a sharing between irrigation costs and power costs and benefits?

Commissioner **Broadbent**. I think that is true. That is how we testified I believe in Buffalo Bill.

The **Chairman**. So if I understand what you are saying now is you are drawing a distinction between original construction and the rehabilitation and betterment project?

Commissioner **Broadbent**. That is the distinction, yes, sir.

The **Chairman**. You have indicated that some of the rehabilitation and betterment are really changes in technology, not just deferred maintenance?

Commissioner **Broadbent**. Correct.

The **Chairman**. Is the rehabilitation and betterment, which is the installation of better technology, better means of utilizing the water, exactly the same as the original cost of the project?

Commissioner **Broadbent**. I don't think I understood that, Senator. I'm sorry.

The **Chairman**. Why is it different to subsidize if you want to use that term—I will use the chairman's term for a moment—with power revenues the original construction of a dam in which these precise features would be included if it were designed today, but then say you can't do it because it is called rehabilitation and bettermen rather than original construction?

Commissioner **Broadbent**. Good question; I am not sure I can answer it but by definition the term "rehabilitation and betterment" in the act speaks to deferred operation and maintenance costs which have not been financed currently by the water users. I think I might indicate this, that I think our basic problem is we have limited resources in which to build these projects that we are talking about.

The **Chairman**. I understand that. That is a budgetary question.

Commissioner **Broadbent**. Yes, sir.

The **Chairman**. Maybe it ought to be answered on a budgetary basis rather than trying to make a distinction that is hard to maintain by saying well, in this particular project we are going to apply a different rule, but we are going to apply the different rule because of budgetary constraints, not because of any logic of the rule.

I understand where you are coming from and I understand the problem that you are trying to address, but I would hate to see an individual project in the dilemma. But even worse than that, I would hate to see a policy established which might be more difficult to live with in the future.

There are an awful lot of examples that we can all make for the support of the policy that you have articulated that has been used in the past with respect to construction of irrigation reclamation projects and which this administration still supports and applies.

I don't think we need to go into all of those now, but now in the Pacific Northwest we have a Columbia Basin account. We don't even attempt to link the two together directly. We just say that we recognize that the development of the water resource within the basin is beneficial to all of the people who live within the basin, and therefore, because it is an economic betterment for the area, we will use some of the power revenues that accrue to that account for the investment in various kinds of water projects. That is an established, continuing, and I think fully supportable policy.

Commissoner **Broadbent**. That policy has been supported through 80 years of Reclamation.

The **Chairman**. It has served us very well.

Commissoner **Broadbent**. Yes, sir.

The **Chairman**. If we are going to depart from that policy I think we have to be very careful in that departure, and I appreciate the dilemma you have today in terms of budgetary crunch.

I also understand where a good many of our friends some from who say the users ought to pay all the cost, but as a matter of fact, sometimes they do, sometimes they don't. That is what I am trying to find out—how we apply it to the rehabilitation and betterment program.

Commissoner **Broadbent**. That is correct.

The **Chairman**. I look forward to working with you as we try to develop that jointly.

Commissoner **Broadbent**. We would look forward to it, too. I think we recognize that Congress and certainly this Senate has recognized those problems. It has probably worked with them a lot longer than myself, certainly, and some of the rest of us in Reclamation, and we would like to be able to work with you in any way we can.

The **CHAIRMAN**. I think it might be fair to indicate that the Reclamation projects born early in the program just after the turn of the century and up through the World War I period, didn't have power features. Nearly all of them since World War I, since the 1920's, through the 1930's, have power features of some kind or another.

Commissoner **BROADBENT**. That is an interesting point, and I hadn't throught of that, but it is certaintly true.

The **CHAIRMAN**. So we have a group that predates the inclusion of power features that may have to be treated in a somewhat different manner than those that were built during the era when power features were the normal condition rather than the abnormal.

Commissoner **BROADBENT**. That is correct.

The **CHAIRMAN**. Thank you.

Senator **NICKLES**. Senator Hecht, do you have any questions?

Senator **HECHT**. No. Thank you.

Senator **NICKLES**. Commissioner, please proceed. Did you have additional comments on Belle Fourche? Or if you care to go into the other two bills we have before us?

Commissoner **BROADBENT**. No further comments, Mr. Chairman; would you like to take the——

Senator **NICKLES**. S. 268 if you would.

Commissoner **BROADBENT**. Mr. Chairman, if I might, we have some rather extensive amendments for 268, so my remarks for the record are going to be pretty long. We do have some extensive recommendations for deletions and additions to S. 268.

Senator **NICKLES**. OK.

Commissoner **BROADBENT**. Most of this has been done in conjunction with the Department of Energy, and some of our amendments are a direct result of our meeting with those people. It is my understanding that they will be submitting for the record some additional comments.

I think in general their views are compatible with my statement.

Mr. Chairman, it is my pleasure to appear before you and members of the committee on S. 268 which would authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric power facilities at 11 existing dams throughout the Western United States.

Power developed by facilities constructed under the authority of this bill would be marketed by the Secretary of Energy under the existing Federal power and marketing system.

We recognize that hydroelectric power can play an increasingly important role in the Nation's drive to increase its domestic energy production and to reduce its dependence on foreign oil. That can be accomplished in several ways, including uprating older generators, enlarging existing powerplants, or adding a powerplant where none was included when the dam was constructed. Non-Federal interests have become increasingly aware of the attractive benefits of hydroelectric energy and have shown substantial interest in developing the hydropower resources at Federal sites.

Mr. Chairman, the administration strongly supports the objective of allowing non-Federal interests to participate in or fully undertake power development of existing Federal sites where feasible.

This will involve a higher degree of local participation, may get power on line sooner in some cases, and will provide an effective market test of the need for additional power. Private developers have an incentive to build and operate cost-effective plants.

We believe, however, that the Secretary of the Interior should be given the discretion to consider the merits of the Federal versus non-Federal development where private parties have shown interests in developing hydropower at an existing resource site.

If I might, let me go back and comment on what Bob Neufeld, State engineer from South Dakota, said about our design criteria on Federal power sites. We are finding that as we are being involved more and more with States and local water user agencies that they all have that same concern. It is our hope to be able to take this to the State engineers at the conference that they have coming up and to be able to develop some kind of a dialogue which will help to resolve the problem of design, design capability, or increased design loads, whether we need to meet maximum probable flood or meet the highest seismic effect that comes along, as we hope that over the next year we may be able to work closely with the States in developing that criteria. We are aware of the problem. We are working on it.

Senator NICKLES. Commissioner, are the requirements that he mentioned administrative or statutory.

Commissoner BROADBENT. They are primarily administrative. They were worked out in conjunction with the Corps of Engineers and NOAA and concurred in by the Bureau of Reclamation.

I personally have some problems with them, with part of the criteria. Not being an engineer, it is easy for me to be critical, but engineers and hydrologists and anybody that is involved in seismic work are very, very strong on them. It is a tough problem. We do intend to sitdown with the States and try and work this problem out, and we are hoping to do that at the State Engineers' meeting that is coming up in the next month or 2.

Senator NICKLES. Good.

Commissioner BROADBENT. If I could, going on with the statement, because of the significant interest in the non-Federal development of hydroelectric power in many Bureau of Reclamation facilities, we recommend that the first section of S. 268 be amended to clarify that the Secretary can use contributed funds for development and operation of all authorized hydroelectric facilities under this act, while maintaining control of critical construction and operational and environmental concerns.

While we believe the Secretary now has such authority under the Sundry Civil Expenses Appropriations Act of 1922, this amendment would further clarify that authority.

We also recommend that the Secretary of the Interior, in consultation with the Secretary of Energy, be authorized to enter into contracts with non-Federal entities for the sharing of costs of powerplant development and the sharing of the revenues or power resulting from such development. We have proposed an amendment to implement this section. This is similar to section 107 of title I of Public Law 97-293, an act to authorize the Buffalo Bill Dam and Reservoir modifications. Our proposed amendment would allow us to work closely with the Department of Energy in strengthening this administration's partnership with the States and other non-Federal sponsors in hydropower development.

Section 4 would specify which powerplants are authorized for modification or replacement and the extent of work necessary on each. We fully support retaining in S. 268 six of the powerplants—Palisades, Whiskeytown, Yellowtail Afterbay, Red Bluff, Anderson Ranch, and Minidoka.

In addition, we recommend the inclusion of the Guernsey Powerplant enlargement which will fully develop the resources at that site. Construction on each of these powerplants is essential in our drive to develop our hydropower resources. It is our intention to encourage non-Federal participation at these sites.

We recommend deletion of the other five powerplants from section 4. The Federal Energy Regulatory Commission has issued a license on Monticello Powerplant and construction is underway. Licenses have also been issued on Friant and Stony Gorge, and permits have been issued on Boca and Prosser Powerplants. Because it is likely that these four powerplants will be fully developed by non-Federal interests, we recommend their deletion from sections 4, 5 and 8 of Senate bill 268.

We also recommend an amendment to section 4 to conform it with present plans for the Minidoka Powerplant and similarly that section 8 be amended to conform the authorized costs of the powerplants with current Bureau of Reclamation plans.

We also recommend that an amendment related to the construction of hydropower facilities at Stampede Dam, Washoe project. A number of non-federal entities have expressed an interest in sharing the costs of such construction. We, therefore, recommend an amendment to allow the Secretary of the Interior to obtain financial participation of any interested non-Federal entities.

Section 5(a) of the bill would require that all power generated by facilities constructed pursuant to this legislation be marketed through existing Federal power marketing programs. Section 5(b) would categorize the powerplants under specific marketing programs.

Our first proposed amendment to section 5(a) of Senate bill 268 would provide authority to the Secretary of Energy to distribute energy to the non-Federal entities that contribute funds to the projects, and protect the Secretary of the Interior's authority to utilize energy from Federal hydroelectric projects or those partially funded by the Federal Government for reclamation project purposes. This would change the current requirement under section 9(c) of the Reclamation Project Act of 1939 that preference in the sale of electric power or the lease of power privileges be given to municipalities, public corporations, or agencies, and cooperative and nonprofit organizations financed by loans under the Rural Electrification Act.

Our proposed amendment would eliminate that restriction for projects authorized under this act and permit the distribution of energy to any entity that provided funding.

Our second proposed section 5(a) which we would designate as section 5(b) would provide that preference power customers be given priority for selection as the powerplant developer, provided that the proposal by the preference customer meets or exceeds other proposals in conserving and utilizing the water resources in the public interest.

Our proposed amendment to section 5(b) which we would redesignate as section 5(c) would limit the amount of energy available for marketing to the amount remaining after energy is delivered to entities providing project funding and for reclamation project uses.

S. 268 does not include provisions for uprating of Hoover powerplant equipment, nor does it provide for adding facilities to accommodate visitors at Hoover Dam. Our proposed amendments would add such provisions to S. 268.

An analysis of equipment at Hoover Powerplant shows that it is economically and environmentally feasible to uprate the powerplant from the current actual operating capacity of 1,450,000 kilowatts to an estimated capacity of 1,818,000 killowatts during routine maintenance. Since the operation and maintenance responsibilities at Hoover powerplant are presently divided among three separate entities, uprating program agreements would be required.

Hoover Dam is also a notable tourist attraction and has been visited by an increasing number of tourists since its construction. Moreover, it is crossed by Highway 93, a popular and well-traveled highway. The number of visitors at Hoover Dam has increased from 298,500 annually in 1947 to 726,300 in 1976—an average of about 2,000 per day. In 1976, more than 2 million vehicles traversed the roadway, with over 76,000 a day in peak months and nearly 6,000 an hour at peak hours. Of these vehicles, 16 percent are trucks. Because of this heavy use and because visitors, must presently walk across the highway to tour the dam, it is necessary to construct new facilities to improve safety conditions at the dam, including the construction of a new bridge below Hoover Dam.

A new highway crossing over the Colorado River is needed to alleviate the escalating traffic congestion at Hoover Dam. Hazardous traffic conditions exist due to the high traffic volume from both the traffic crossing the dam on Highway 93, and the tourist influx of the dam itself. Peak hour traffic exceeds the traffic capacity of the existing highway across Hoover Dam, resulting in traffic delays, restriction of visitor use of the dam, safety problems, and hindrance to construction, operation, and maintenance work at the dam.

Given this background, we strongly recommend that S. 268 be amended to authorize the Secretary to construct new facilities necessary to uprate the generating machinery and equipment, improve traffic conditions, eliminate potential safety hazards, and reduce tourist congestion at Hoover Dam, Boulder Canyon project, Arizona-Nevada. The facilities would include new generator windings and other equipment associated with powerplant, new elevators, new parking areas, improved roadways, and other facilities. Specific amendments to accomplish this are attached.

It is anticipated that the major portion of the funding for uprating will come from the States or public entities benefiting from the uprating program. Moreover, much of the expense of operating and maintaining the visitor facilities would be recovered through user charges. Construction costs at visitor facilities would be repaid from power revenues. In order to maintain a reasonable construction schedule, the Secretary would be required to execute a contract with such entities to provide the United States with the required funding to be advanced as requested by the Secretary.

We are proposing a number of amendments to S. 268 relating to the Boulder Canyon project. The benefits of the policy embodied in this legislation are clear. Uprating, maintaining and constructing hydroelectric powerplants at water projects are essential to our efforts in meeting energy needs. Moreover, this legislation gives us an excellent opportunity to work with the Department of Energy in encouraging non-Federal participation in the development of hydroelectric power at many Bureau of Reclamation facilities such as Hoover Dam and Palisades. Enactment of S. 268 with the attached proposed amendments would strengthen the joint Federal and State partnership in water resources development.

Mr. Chairman, let me again express my appreciation for the opportunity to appear before this subcommittee on this important bill, and I would be happy to answer any questions you may have.

[The prepared statement of Commissioner Broadbent on S. 268 follows:]

STATEMENT OF
ROBERT N. BROADBENT
COMMISSIONER, BUREAU OF RECLAMATION
DEPARTMENT OF THE INTERIOR
BEFORE THE SUBCOMMITTEE ON WATER AND POWER
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
S. 268, A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN HYDROELECTRIC POWERPLANTS AT VARIOUS EXISTING WATER PROJECTS

MARCH 24, 1983

Mr. Chairman, members of the subcommittee, it is a pleasure for me to be with you today to discuss S. 268 which would authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric power facilities at 11 existing dams throughout the western United States. Power developed by facilities constructed under the authority of this bill would be marketed by the Secretary of Energy under existing Federal power marketing systems.

We recognize that hydroelectric power can play an increasingly important role in the Nation's drive to increase its domestic energy production and to reduce its dependence on foreign oil. That can be accomplished in several ways, including uprating older generators, enlarging existing powerplants, or adding a powerplant where none was included when the dam was constructed. Non-Federal interests have become increasingly aware of the attractive benefits of hydroelectric energy and have shown substantial interest in developing the hydropower resources at Federal sites.

Mr. Chairman, this Administration strongly supports the objective of allowing non-Federal interests to participate in or fully undertake power development at existing Federal reservoir sites, where feasible. This will involve a higher degree of local participation, may get power on line sooner in some cases, and will provide an effective market test of the need for additional power. Private developers have an incentive to build and operate cost-effective plants. We believe, however, that the Secretary of the Interior should be given the discretion to consider the merits of Federal versus non-Federal development where private parties have shown interest in developing hydropower at an existing reservoir site.

Many of the operational problems which might arise when a private plant is built at a Federal project can be handled by contractual arrangements. For instance, where water releases must be scheduled to serve multiple purposes, we would write contract clauses requiring non-Federal power operations to be consistent with other project operations and with the fulfillment of Federal statutory and contractual obligations to other water and power users.

We do not endorse, as a general practice, authorization for construction of water resources development projects before feasibility studies are complete. Accordingly, we recommend that the first section of the bill be amended to require Secretarial findings of economic and financial feasibility, compliance with the applicable environmental laws, and the impracticality of non-Federal development before authorization of any Federal construction of the powerplants designated in section 4.

We have recently streamlined our planning process for water projects to reduce the time and costs involved. Recognizing that the projects we support in this bill are modifications of existing projects, some of which are already authorized for power, and considering the need for new power and inherent advantages of hydropower, we can accept authorization in this case without completion of the normal planning process because it will shorten the time necessary for bringing power on line.

Because of the significant interest in the non-Federal development of hydroelectric power at many Bureau of Reclamation facilities, we recommend that the first section of S. 268 also be amended to clarify that the Secretary could use contributed funds for development and operation of all authorized Federal hydroelectric facilities under this Act, while maintaining control of critical construction, operational and environmental concerns. The amendment we recommend to accomplish this would also allow sharing of costs and benefits in projects where the Federal Government needs some of the energy produced. While we believe the Secretary now has such authority under the Sundry Civil Expenses Appropriations Act of 1922, this amendment would clarify that authority.

We also recommend that the Secretary of the Interior, in consultation with the Secretary of Energy, be authorized to enter into contracts with non-Federal entities for the sharing of the costs of powerplant development and the sharing of the revenues or power resulting from such development. We have proposed an amendment to implement this similar to section 107 of title I of Public Law 97-293, an Act to authorize Buffalo Bill Dam and Reservoir modifications. Our proposed amendment would allow us to work closely with the Department of Energy in strengthening this Administration's partnership with the States and other non-Federal sponsors in hydropower development.

Section 4 would specify which powerplants are authorized for modification or replacement and the extent of work necessary on each. We fully support retaining in S. 268 six of the powerplants: Palisades, Whiskeytown, Yellowtail Afterbay, Red Bluff, Anderson Ranch and Minidoka. In addition, we recommend the inclusion of the Guernsey powerplant enlargement, which will fully develop the resource at that site. Construction on each of these powerplants is essential in our drive to develop our hydropower resources. It is our intention to encourage non-Federal participation at these sites.

We recommend deletion of the other five powerplants from section 4. The Federal Energy Regulatory Commission (FERC) has issued a license on Monticello powerplant and construction is underway. Licenses have also been issued on Friant and Stony Gorge, and permits have been issued on Boca and Prosser powerplants. Because it is likely that these four powerplants will be fully developed by non-Federal interests, we recommend their deletion from sections 4, 5, and 8 of S. 268.

We also recommend an amendment to section 4 to conform it with present plans for the Minidoka powerplant, and similarly, that section 8 be amended to conform the authorized costs of the powerplants with current Bureau of Reclamation plans.

We also recommend an amendment related to the construction of hydropower facilities at the Stampede Dam, Washoe Project. A number of non-Federal entities have expressed an interest in sharing the costs of such construction. We therefore recommend an amendment to allow the Secretary of the Interior to obtain financial participation of any interested non-Federal entities.

Mr. Chairman, the project power facilities which have been proposed in S.268, if constructed, would generate about 512 million kilowatt hours annually of electric energy which is equivalent to about 920,000 barrels of oil. If the bill is amended as we have recommended, the powerplants included would generate about 385 million kilowatt hours annually which is equivalent to about 693,000 barrels of oil. We anticipate that those 7 powerplants we recommend be deleted will be developed by non-Federal entities. Attached to my statement is a table showing what each project would contribute individually in arriving at those totals.

The total cost of the 11 projects included in S. 268 is estimated to be $283,752,000 based on October 1983 prices. The total cost of the 6 projects that we are recommending remain in the legislation is $235,234,000. The cost of the recommended additional powerplant, Guernsey, would be $22,337,000. Each of the projects listed in S. 268 has been investigated in various degrees over the last several years, and a report has been prepared or is being prepared on each one.

Section 5(a) of the bill would require that all power generated by facilities constructed pursuant to the legislation be marketed through existing Federal power marketing programs. Section 5(b) would categorize the powerplants under specific marketing programs.

Our first proposed amendment to section 5(a) of S. 268 would provide authority to the Secretary of Energy to distribute energy to the non-Federal entities that contribute funds to the projects, and protect the Secretary of the Interior's authority to utilize energy from Federal hydroelectric projects, or those partially funded by the Federal

Government, for Reclamation project purposes. This would change the current requirement under section 9(c) of the Reclamation Project Act of 1939, that preference in the sale of electric power or the lease of power privileges be given to municipalities, public corporations or agencies, and cooperative and non-profit organizations financed by loans under the Rural Electrification Act. Our proposed amendment would eliminate that restriction for projects authorized under this Act and permit the distribution of energy to any entity that provided funding.

Our second proposed amendment to section 5(a) (which we would designate as section 5(b)) would provide that preference customers be given priority for selection as the powerplant developer, provided that the proposal by the preference customer meets or exceeds other proposals in conserving and utilizing the water resources in the public interest.

Our proposed amendment to section 5(b) (which we would redesignate as section 5(c)) would limit the amount of energy available for marketing to the amount remaining after energy is delivered to entities providing project funding and for Reclamation project uses.

Section 7 would establish an interest rate based on 15-year government held obligations for the repayment requirements for interest-bearing functions of powerplants. A more accurate measure of current Treasury borrowing costs would be determined by market yields on outstanding Treasury securities with remaining periods to maturity comparable to the period of investment. Our proposed amendment to section 7 provides a more equitable and effective way of approximating Treasury's borrowing costs.

S. 268 does not include provisions for uprating the Hoover powerplant equipment, nor does it provide for adding facilities to accommodate visitors at Hoover Dam. Our proposed amendments would add such provisions to S.268.

Because the Boulder Canyon Project has been in operation for more than 40 years, a considerable amount of generating equipment is in need of replacement. The Bureau of Reclamation, supported by study results and recommendations of the General Accounting Office, and encouraged by the Secretary of the Interior, has established a standard practice to uprate original plant output capacity at the time normal maintenance is undertaken, whenever feasible, in order to help meet the Nation's overall energy requirements. An analysis of equipment at Hoover Powerplants shows that it is economicially and environmentally feasible to uprate the powerplant from its current actual operating capacity of 1,450,000 kilowatts (kW) to an estimated capacity of 1,818,000 kW during routine maintenance. Since the operation and maintenance responsibilities at Hoover Dam and Powerplant are presently divided among three separate entities, uprating program agreements would be required.

Hoover Dam is also a notable tourist attraction, and has been visited by an increasing number of tourists since its construction. Moreover, it is crossed by Highway 93, a popular and well-traveled highway. The number of visitors at Hoover Dam has increased from 298,500 annually in 1947 to 726,300 in 1976, an average of about 2,000 per day. In 1976, more than 2 million vehicles traversed the roadway, with over 76,000 a day in peak months and nearly 6,000 an hour at peak hours. Of these vehicles, 16 percent are trucks. Because of this heavy use and because visitors must presently walk across the highway to tour the dam, it is necessary to construct new facilities to improve safety conditions at the dam, including the construction of a new bridge below Hoover Dam.

A new highway crossing over the Colorado River is needed to alleviate the escalating traffic congestion at Hoover Dam. Hazardous traffic conditions exist due to the high traffic volume from both the traffic crossing the dam on U.S. Highway 93 and the tourist influx to the dam itself. Peak hour traffic exceeds the traffic capacity of the existing highway across Hoover Dam resulting in traffic delays, restriction of visitor use of the dam, safety problems, and hindrance to construction, operation and maintenance work at the dam.

Given this background, we strongly recommend that S. 268 be amended to authorize the Secretary to construct new facilities necessary to uprate the generating machinery and equipment, improve traffic conditions, eliminate potential safety hazards and reduce tourist congestion at Hoover Dam, Boulder Canyon Project, Arizona-Nevada. The facilities would include new generator windings, and other equipment associated with the powerplant, new elevators, new parking areas, improved roadways, and other facilities. Specific amendments to accomplish this are attached.

Under the Boulder Canyon Project Act of 1928, $165 million is authorized to be appropriated. However, the total cost of the betterment, visitor facilities and the bridge would require the cost ceiling to be increased from $165 million to $322 million. It is anticipated that the major portion of the funding for uprating will come from the States or public entities benefiting from the uprating program. Moreover, much of the expense of operating and maintaining the visitor facilities would be recovered through user charges. Construction costs of visitor facilities would be repaid from power revenues. In order to maintain a reasonable construction schedule, the Secretary would be required to execute a contract with such entities to provide the United States with the required funding, to be advanced as requested by the Secretary.

We are proposing a number of amendments to S.268 relating to the Boulder Canyon Project. Our first proposed amendment would increase the ceiling for construction of Hoover Dam to $322 million. The Colorado River Dam Fund was established to carry out the provisions of the Boulder Canyon Project Act. The Secretary of the Treasury was authorized to advance to the fund from time to time such amounts as the Secretary of the Interior deemed necessary. However, section 3 of the Act limited appropriations to an amount not to exceed $165 million. As of October 1, 1981, approximately $1.9 million of the original $165 million ceiling remained. The Bureau of Reclamation plans to use the major portion of this remainder to fund the incremental uprating cost of a pilot program currently underway for units A5, A7, N3 and N4. The major obstacle to the continuation of the uprating program is the appropriation ceiling of $165 million on the Boulder Canyon Project.

The cost of completing the uprating program, in addition to the $1.9 million remaining in the original ceiling, is estimated to be $105 million based on October 1983 prices. Of this total, $60 million would be charged to replacement of worn out equipment as needed to keep the facilities in good operating condition, and for normal operation and maintenance, funded from revenues currently available. The remaining $45 million would be charged to betterment and would be derived from the new funding authorization with indexing. In addition, $32 million, based on October 1983 prices would be needed for new visitor facilities and $80 million (October 1983 prices) would be required for the bridge, requiring a total increase in authorization of $157 million.

Our second proposed amendment would authorize the addition of a component to the rates charged for power and energy of the Boulder Canyon project after the current contracts expire in May 1987 to assure that the lower Colorado River Basin Development Fund will have sufficent revenues to carry out its intended purposes.

Our third proposed amendment would establish an interest rate for new investment repayment requirements under the Boulder Canyon Project Adjustment Act of 1940 that would be determined by market yields on outstanding Treasury securities with remaining periods to maturity comparable to the period of investment.

The fourth proposed amendment would require contracts between the Secretary of the Interior and non-Federal entities for advancement of funds before initiation of a non-Federal uprating program. This section would also provide that any new capacity developed using funds advanced by non-Federal entities be allocated only to those entities advancing such funds. Furthermore, the amendment would allow funds advanced for the purposes of this Act to be placed in the Colorado River Dam Fund, providing an exception to the requirement of the Contributed Funds Act of 1921 that all contributed funds be placed in the Reclamation Fund.

Finally, our last proposed amendment would provide for repayment by the Boulder Canyon Project of facilities authorized under our proposed amendments.

The benefits of the policy embodied in this legislation are clear. Uprating, maintaining and constructing hydroelectric powerplants at water projects are essential to our efforts in meeting energy needs. Moreover, this legislation gives us an excellent opportunity to work with the Department of Energy in encouraging non-Federal participation in the development of hydroelectric power at many Bureau of Reclamation facilities such as Hoover Dam. Enactment of S. 268 with our attached proposed amendments would strengthen the joint Federal and State partnership in water resources development.

The information we have provided is preliminary, and additional work needs to be done to adequately assure effective projects. It is for this reason, Mr. Chairman, that we recommend that construction not be initiated until we know whether each project is economically, financially, and environmentally feasible.

Mr. Chairman, let me again express my appreciation for the opportunity to appear before this Subcommittee on this important bill. I would be happy to answer any questions you may have.

As proposed in
S. 268

Project	No. of Powerplants	No. of Units	Annual Generation (Million Kilowatt Hours)
Friant	3	3	101
Whiskeytown	1	1	11
Yellowtail Afterbay	1	1	62
Red Bluff Diversion Dam	1	4	53
Stony Gorge	1	1	11
Monticello	1	1	43
Palisades	1	2	158
Anderson Ranch	1	1	19
Minidoka	1	2	48
Boca	1	1	3
Prosser	1	1	3
Total	13	18	512

With Suggested Department of the Interior Amendments

Whiskeytown	1	1	11
Yellowtail Afterby	1	1	62
Red Bluff Diversion Dam	1	4	53
Palisades	1	2	158
Anderson Ranch	1	1	19
Minidoka	1	2	48
Guernsey	1	1	34
Hoover	-	-	-
Total	7	12	385

Suggested Department of the Interior Amendments to S. 268

1. Section 1. On page 1, line 3, delete the word "The" and insert in lieu thereof "(a)The".

On page 2, line 6, add the following after the period:

> Federal construction of any powerplant designated in section 4 of this Act shall not be deemed to be authorized until such time as the Secretary of the Interior has made findings of the economic and financial feasibility thereof and the impracticality of non-Federal development of the powerplant, and has complied with applicable environmental laws.

On page 2, line 9, strike out the word "postauthorization" and insert in lieu thereof "feasibility".

On page 2, line 10, add the following after the period:

> (b) The Secretary of the Interior is authorized:
>
> (1) to utilize funds contributed by non-Federal entities for the planning, design, construction, operation, maintenance and replacement of the powerplants authorized under this Act and such funds may be covered directly into the Reclamation Fund;
>
> (2) upon consultation with the Secretary of Energy, to enter into contracts with the contributors of such funds upon such terms and conditions as the Secretary of the Interior deems necessary for the sharing of the costs of the powerplant development and the sharing, at the option of the contributors, of the revenues or the power from the development; and
>
> (3) to allow non-Federal entities to construct or operate powerplants authorized under this Act.

2. Section 2. On page 2, insert the words "section 4 of" after the word "in" on line 14 and before the word "this" on line 17.

On page 2, line 17, replace the comma after the word "Act" with a period and delete the remainder of line 17 and delete lines 18 through 20.

3. Section 3. On page 3, line 1, add the word "contractual" after the word "maintain".

On page 2, line 21, redesignate section 3 as subsection 3.(a) and insert immediately after page 3, line 3, the following new subsection:

> (b) The Secretary of Energy is authorized to purchase replacement capacity, energy, or both in order to maintain contractual deliveries to customers during unit outages which result from Federal construction or uprating of the powerplants authorized in this Act.

4. Section 4. On page 3, strike out lines 4 through 13 after "SEC. 4." and renumber the subsections accordingly.

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On page 4, strike out lines 1 through 6 and lines 18 through 23 and renumber the subsections accordingly.

On page 4, beginning on line 15, strike out "of a turbine generator unit of thirty thousand kilowatts" and insert in lieu thereof the following: "of two turbine generator units of fifteen thousand kilowatts each".

On page 4 add the following to Section 4:

> (g) Guernsey powerplant enlargement, North Platte Project, Wyoming, consisting of one turbine-generator unit to increase the powerplant capacity by fifteen thousand kilowatts.

5. Section 5. (a). On page 4, line 25, insert the words "section 4 of" after the word "to".

On page 4, line 25, insert after the word "delivered" the following:

> by the Secretary of Energy as follows:
>
> (1) First, to non-Federal entities which contribute funds for the development of the powerplants and elect to receive power pursuant to subsection (b) of the first section of this Act in an amount proportionate to their contribution, on terms satisfactory to the Secretary of the Interior, notwithstanding the provisions of section 9(c) of the Reclamation Project Act of 1939 (43 U.S.C. 485h; 53 Stat. 1194) or other applicable laws;
>
> (2) Second, to meet the energy requirements of Bureau of Reclamation projects in accordance with existing law and policy consistent with the provisions of this Act; and
>
> (3) Third,

On page 5, line 1, strike out the words "to the Secretary of Energy".

On page 5, line 5, redesignate subsection (b) as subsection (c) and immediately after line 4 add the following:

> (b) the Secretary of Interior shall give preference in accepting contributed funds or in allowing non-Federal development to those entities, as defined in section 9(c) of the Reclamation Project Act of 1939 (43 U.S.C. 485h; 53 Stat. 1198), who have shown interest in developing the hydropower resource involved; provided that the project development proposal of any such entity is equally well adapted, or is made equally well adapted, to conserving and utilizing the water resources and optimizing the power production of the site in the public interest as are the proposals submitted by other interested entities.

6. Section 5. (b). On page 5, line 5, strike out the word "The" and insert in lieu thereof "Any power available for marketing under subsection (a)(3) of this section from the". On line 5 insert after the word "in" the following: "section 4 of".

On page 5, lines 8 and 9, strike out the words "Friant, Red Bluff, Whiskeytown, Stony Gorge and Monticello" and insert in lieu thereof " Red Bluff and Whiskeytown".

On page 5, lines 12 and 13, strike out the words ",and Buffalo Bill Dam powerplant replacement".

On page 5, line 14, strike out the words "Eastern Division,".

On page 5, strike out lines 20 through 23 and insert in lieu thereof the following:

> (4). Guernsey powerplant unit shall be marketed through the Western Division, Pick-Sloan Missouri Basin Program power marketing program.

7. Section 7. On page 6, delete lines 3 through 11 and insert in lieu thereof:

> SEC. 7. For those projects authorized in section 4 of this Act and financed by the Federal government, the interest rate used for computing interest during construction, and interest on the unpaid balance of the interest-bearing reimbursable cost of the project, shall be determined by the Secretary of the Treasury taking into consideration average market yields on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the reimbursement period of the project during the month preceding the fiscal year in which the costs are incurred. To the extent that more than one interest rate is determined pursuant to the preceding sentence, the Secretary of the Treasury shall establish for repayment purposes an interest rate at a weighted average of the rates so determined.

8. Section 8. On page 6, line 14 insert the words "section 4 of" after the word "in".

On page 6, line 16 strike out "1981" and insert in lieu thereof "1983".

On page 6, line 19 through 23, strike out the sentence beginning with the words "There are also" and insert in lieu thereof the following:

> There are also authorized to be appropriated to the Secretary of Energy such sums as may be necessary for the purposes of sections 2 and 3 of this Act, and to the Secretary of the Interior such additional sums as may be necessary for the operation and maintenance of the Federal powerplants authorized by this Act.

On page 6, strike out line 24 and renumber paragraph (2) as (1).

On page 6, line 25 strike out "$3,390,000" and insert in lieu thereof "$3,780,000".

On page 7, strike out lines 3, 4, 9 and 10 and renumber the paragraphs accordingly.

On page 7, line 1, strike out "$24,200,000" and insert in lieu thereof "$25,600,000".

On page 7, line 2, strike out "$38,030,000" and insert in lieu thereof "$42,100,000".

On page 7, line 5, strike out "$65,300,000" and insert in lieu thereof "$76,000,000".

On page 7, line 6, strike out "$13,200,000" and insert in lieu thereof "$14,317,000".

On page 7, line 8, strike out "$60,000,000" and insert in lieu thereof "$73,437,000".

After page 7, line 8 add the following:

(7) Guernsey powerplant enlargement, $22,337,000.

On page 7, line 14 delete the period after the word "Act" and add the following:

for the Federal projects authorized by section 4 of this Act.

9. After page 7, line 14, add the following new sections:

SEC. 9. The Washoe Project Act of 1956 (70 Stat. 775) is hereby amended:

in section 1, inserting after the final period the following sentence:

The Secretary of the Interior may utilize funds contributed by non-Federal entities for the planning, design, construction, operation maintenance, and replacement of any hydroelectric power facilities at Stampede Dam, Washoe Project. Any contributing entities shall receive either a share of the power or a share of the revenues proportional to their contribution.

SEC. 10. (a) The Secretary of the Interior is authorized to increase the capacity of existing generating equipment and appurtenances at Hoover Powerplant (hereinafter "Uprating Program") and to improve parking, visitor facilities, and roadways; and to provide additional elevators, and other facilities that will contribute to the safety and sufficiency of visitor access to Hoover Dam and Powerplant (hereinafter "Visitor Facilities Program").

(b) The Secretary of the Interior is authorized to construct a Colorado River bridge crossing, including suitable approach spans, immediately downstream from Hoover Dam for the purpose of alleviating traffic congestion and reducing safety hazards. This bridge shall be a part of the Boulder Canyon Project and shall be funded or repaid from the Colorado River Dam Fund or the Lower Colorado River Basin Development Fund.

(c) The Secretary of Energy is authorized to purchase or construct, operate, and maintain additional transmission facilities as he determines to be necessary to connect the Hoover Powerplant and Mead Substation to accomplish distribution and marketing of energy generated at Hoover Powerplant.

SEC. 11. Section 403(c) of the Colorado River Basin Project Act of 1968 (43 U.S.C. 1543(c); 82 Stat. 894) is amended by redesignating paragraph (2) as subparagraph (2)(i) and by inserting immediately thereafter the following new subparagraph:

> (ii) Upon the expiration of existing power contracts in May, 1987 for the Boulder Canyon Project and in May, 2005 for Parker-Davis Project, the Secretary of the Interior, after consultation with the affected parties, shall determine the annual revenues required to fulfill the purposes set forth in subsections (f) and (g) of this section in addition to all other purposes of this title. The Secretary of Energy shall include a component or components in the power and energy rates applicable to such projects based on the Secretary of the Interior's determination. The Central Arizona Project distribution costs shall not be repaid under this provision.

SEC. 12. The Boulder Canyon Project Act of 1928 (43 U.S.C. 617 et seq.; 45 Stat. 1057) is amended:

> (1) in section 2(b), by striking out "except that the aggregate amount of such advances shall not exceed the sum of $165,000,000." by replacing the comma after the word "Act" with a period, and by inserting after "Of this amount" the words "so advanced,"; and
>
> (2) in section 3, by deleting "$165,000,000" and inserting in lieu thereof: "$322,000,000, of which $157,000,000 (October 1983 price levels) may be adjusted plus or minus such amounts as may be justified by reason of ordinary fluctuations of construction costs as indicated by engineering cost indexes applicable to the type of construction involved herein."

The $157,000,000 represents the additional amount required (October 1983 prices) for uprating the capacity of the generating machinery and equipment at the Boulder Canyon Project, and improving facilities for accommodating visitors, improving traffic flow over the river, alleviating potential safety hazards and expediting access at Hoover Dam.

SEC. 13. The Boulder Canyon Project Adjustment Act of 1940 (43 U.S.C. 618 et seq., 54 Stat. 774), as amended and supplemented, is further amended:

> (a) In section 1 by deleting the phrase "during the period beginning June 1, 1937 and ending May 31, 1987" appearing in the introductory paragraph of section 1 and in section 1(a), and inserting in lieu thereof "beginning June 1, 1937".
>
> (b) In section 1(b) by deleting the phrase "and such portion of such advances made on and after June 1, 1937, as (on the basis of repayment thereof within such fifty-year period or periods as the Secretary may determine) will be repayable prior to June 1, 1987" and inserting in lieu thereof "and such advances made on and after June 1, 1937, over fifty-year periods."

These changes are necessary to extend the Secretary of the Interior's authority to assess charges to meet the cost of operation and maintenance and to repay advances to the Colorado River Dam Fund in addition to other purposes.

SEC. 14. (a) The Boulder Canyon Project Adjustment Act of 1940 (54 Stat. 774; 43 U.S.C. 618 et seq.) is amended in section 6 by changing the final period to a semicolon and by inserting the following proviso:

> "Provided that, the interest rate used for computing interest during construction, and interest on the unpaid balance of the interest-bearing reimbursable cost of the project for funds advanced after October 1, 1983, shall be determined by the Secretary of the Treasury taking into consideration average market yields on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the reimbursement period of the project during the month preceding the fiscal year in which the costs are incurred. To the extent that more than one interest rate is determined pursuant to the preceding sentence, the Secretary of the Treasury shall establish for repayment purposes an interest rate at a weighted average of the rates so determined."

(b) In section 12, in the paragraph beginning with "Replacements", by deleting "from June 1, 1937, to May 31, 1987, inclusive" and inserting in lieu thereof "beginning June 1, 1937".

SEC. 15. (a) The allocation of any capacity made available by the Uprating Program shall be determined by the Secretary of Energy, in consultation with the Secretary of the Interior, in conjunction with the Boulder Canyon Project power marketing program, except that any new capacity financed under any contract under subsection (b) of this section shall be allocated only to entities advancing funds for such Uprating Program. In making his determination the Secretary of Energy shall take into account the contribution of such entities.

(b) The Secretary of the Interior shall not initiate any Uprating Program under section 10 of this Act until contracts satisfactory to the Secretary of the Interior, in consultation with the Secretary of Energy, have been entered into with entities within the States of Arizona, California, and Nevada, for the advancement of such funds as are necessary to accomplish the Uprating Program, said monies to be advanced as required to maintain a reasonable construction schedule.

(c) Notwithstanding any other provision of the law, funds advanced by non-Federal entities for use in the programs authorized by section 10 of this Act shall be deposited in the Colorado River Dam Fund and shall be available to satisfy the purpose of this Act.

SEC. 16. Reimbursement of funds appropriated for construction of modified or expanded facilities authorized under section 10 of this Act, exclusive of those funds advanced by project beneficiaries, shall be a repayment requirement of the Boulder Canyon Project beginning with the first day of the month following completion of the installation, except that the costs of the visitors facilities shall become a repayment requirement beginning June 1, 1987, or when substantially completed as determined by the Secretary, if later.

Senator NICKLES. Thank you very much, Mr. Commissioner. I have a couple of questions. You are stating your support for what, six of the projects, hydro projects, eliminating five that would be funded through private means?

Commissioner BROADBENT. Six, and the addition of two others, and the elimination of five; the additions are Guernsey and Hoover uprating.

Senator NICKLES. Those five are under existing contracts right now?

Commissioner BROADBENT. If I could, on Monticello they are under construction, under FERC license. On Friant and Stoney Gorge, there is a license that has already been issued by FERC. On Boca and Prosser there are permits granted on both of those facilities, and we feel that they will be developed by non-Federal interests. We have had extensive discussion with all of those people.

Senator NICKLES. Will they be developed in conjunction with power administrations?

Commissioner BROADBENT. Well, many of them wish to market their power through the power administrations. In these cases, I think they are all Western Area Power Administration facilities. In some of the other cases, they would include Bonneville, but some developers would like to market their power through the Federal system, and that is why it is necessary to work with the power administrations so that we can tie in with their system.

Senator NICKLES. Private utilities would be the beneficiaries?

Commissioner BROADBENT. Private utilities are the beneficiaries. For instance, I think on Monticello which is presently under construction, I believe that Pacific Gas & Electric has purchased that power. I had better not say that. I am not sure, but I can furnish that to you for the record, but I believe that they all are in the process of getting agreements to sell the power to specific utilities.

Senator NICKLES. We would appreciate a status on each one.

Commissioner BROADBENT. I can give you a status report on each one of those facilities. I will provide it for the record.

Senator NICKLES. OK, so then you were talking about proceeding ahead on the, what, the six that would be left over?

Commissioner BROADBENT. It would be authority. We would have to complete the study. We ask for authorization based on a Secretarial finding that they have no environmental problems, they are feasible, and that they are economically practical, and after that we would be before Congress for appropriation.

Senator NICKLES. Can you give us a study or a report on where you stand? Are you conducting the study on those six at this time?

Commissioner BROADBENT. Yes, sir, we can give you—I think I even have that—I can provide it for the record.

Senator NICKLES. I would appreciate that, and included in those studies it would show that the demand is there for the energy?

Commissioner BROADBENT. In many cases we have private interests who have already entered into tentative agreements—in the case of Palisades, the State of Idaho; in the case of Hoover, the power allottees have indicated an interest. They have indicated they will support up-front financing.

In the case of Guernsey, we have people interested. We have a number of them, and we will provide those for the record.

Senator NICKLES. In those that would proceed I guess on a joint Federal/private cooperation where the privates are putting up substantial up-front money as a cost sharing I guess, they would receive in return for that a percentage of the electricity that would be sold?

Commissioner BROADBENT. There are two ways to do it. You can do as they did in Buffalo Bill where the State of Wyoming put up the money, and they will receive back the dollars as the power is marketed through the marketing agency, in this case the Western Area Power Administration, or you can do it as they have proposed in Hoover where the allottees, the present power users, would put up the money and they would receive the energy. It is either money returned from sale of the energy, or else money for energy, but they would put up the money up front.

Senator NICKLES. The contracts where they would be paying back, would they vary in length? Each one would be individually negotiated?

Commissioner BROADBENT. Most of these are going to be fully up front money for the power components. It would be given to the Government at the time of construction and then they would receive back the benefits from putting that money up front through the sale of the energy as it is marketed by whatever source it is marketed or receiving energy from the power facility.

Senator NICKLES. The ones that did not have the private sector portion, would all six of those have——

Commissioner BROADBENT. We are talking about all of them for the power component.

Senator NICKLES. On the power side, if you have say 60 percent came from outside or private sources and so——

Commissioner BROADBENT. Excuse me. I'm sorry?

Senator NICKLES. If you had a portion—I am trying to think if you had one of these projects where there was 50 percent participation from the private and/or they were going to purchase 50 percent of the power, is that——

Commissioner BROADBENT. That is the case in Buffalo Bill—I think they are purchasing somewhere between 42 and 47 percent. They would be entitled to 42 percent of the benefits as well because they put the money up front, and that is provided for in the bill that passed last year and that is what we asked for in this one.

Senator NICKLES. Senator McClure, do you have any questions on this?

The CHAIRMAN. Thank you, Mr. Chairman, Mr. Broadbent, in each of these cases do we know what the marketing arrangement for the power will be at the time the arrangement is entered into of the non-Federal entity?

Commissioner BROADBENT. We would by the time we entered into a contract for non-Federal development. We are not in all cases there, but we are in active discussion.

The CHAIRMAN. You indicated in some instances the non-Federal entities will instead of receiving just their money back from Federal sale of power, they would get a share of the power and they would market the power?

Commissioner **Broadbent**. Yes, sir, they would either market the power or use it themselves and that is one of the amendments that we asked for under this act.

The **Chairman**. In each instance do you know how that power will be marketed before you enter into that contractual arrangement?

In other words, do you know who it will be marketed by and how the rates will be determined and who will make the determination of rates?

Commissioner **Broadbent**. We don't know, but it is necessary that we know it before we would enter into a contract.

The **Chairman**. The reason I asked the question is I think there is a growing concern about where we ultimately may go under some of the proposals that have been adopted by Congress in the past for the development of new hydro projects and other energy-producing projects requiring the utilities in the area to accept the power at the avoided cost rate. The growing criticism is that those avoided cost rates are not cost based as is the usual case for the sale of power through a utility system.

Commissioner **Broadbent**. If I could, it wouldn't be our intention to allow a private interest to come in and build this and then sell it to a marketing agency at an avoided cost.

The **Chairman**. It will be——

Commissioner **Broadbent**. Negotiation.

The **Chairman**. It will be on some kind of a basis on which it is cost-based power?

Commissioner **Broadbent**. Yes, cost based and adequate negotiation between both the marketer of the energy and the person that owns the energy.

The **Chairman**. In your proposed amendments, is that spelled out that that will be the case?

Commissioner **Broadbent**. No, sir.

The **Chairman**. Should it be spelled out?

Commissioner **Broadbent**. We never discussed that until you brought it up.

The **Chairman**. Because we might run into the case where non-Federal entities would come in fully expecting to market the power under the PURPA rules.

Commissioner **Broadbent**. If you would like, we can explore that and will be glad to furnish an amendment for that case.

The **Chairman**. I would appreciate that because these are Federal projects.

Commissioner **Broadbent**. I understand.

The **Chairman**. We would want that minimal protection with respect to the cost of the power.

Commissioner **Broadbent**. I understand that, and we just had never thought of it. It is a point well taken.

The **Chairman**. Finally, Mr. Commissioner, I note that you are suggesting that certain improvements are required at Hoover Dam. One is visitor facilities. Now I assume that is not an irrigation benefit?

Commissioner **Broadbent**. No, sir.

The **Chairman**. It is to be financed by appropriation?

Commissioner **Broadbent**. Yes, sir.

The CHAIRMAN. And repaid from power revenues?

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. $32 million estimate; you are going to suggest, you are suggesting——

Commissioner BROADBENT. That isn't all visitor facilities. The $32 million isn't all visitor facilities. Part of it are new elevators and major safety facilities.

The CHAIRMAN. I was just looking at page 10 of your statement.

Commissioner BROADBENT. I think that is visitor and safety facilities, Mr. Chairman.

The CHAIRMAN. The top of the page, the first full sentence—in addition, $32 million based on October 1983 prices will be needed for the visitor center.

Commissioner BROADBENT. Yor are right. The $32 million is for the visitor center and some of the safety facilities around the existing powerplant.

The CHAIRMAN. Are those safety facilities for visitors or for the workmen?

Commissioner BROADBENT. Well, they are for the road that goes across the dam, for parking facilities. I guess it would be more for the visitor than it wold be for the worker.

The CHAIRMAN. And you are suggesting that the need for the bridge which you identify at $80 million is a traffic-related, not an irrigation-related requirement?

Commissioner BROADBENT. That is correct.

The CHAIRMAN. That is to be paid for by taxpayers of this county, financed by the taxpayers, and then repaid from power revenues?

Commissioner BROADBENT. That is correct.

The CHAIRMAN. Why is it more important to provide visitor facilities and highway facilities than it is to rehabilitate their aging system?

Commissioner BROADBENT. That is a very good question. I am not sure I am prepared to answer that.

The CHAIRMAN. Thank you, Mr. Commissioner. Thank you, Mr. Chairman.

Senator NICKLES. Senator Hecht, do you have any questions?

Senator HECHT. Yes. Commissioner Broadbent, you and I have both seen Hoover Dam for many, many years. What is the reason or explanation why the facilities have deteriorated so badly? Why haven't they kept them up?

Commissioner BROADBENT. I don't think there is any deterioration of Hoover Dam—our problem is that we have had such increased traffic and such an increase in flow over that.

Now the operating generators just wear out. they are wearing out all the time and we are upgrading generators. You have to rewind them as a matter of standard O&M, and with new technology you are able to upgrade them so they produce more energy. That is a standard technology that is going on, and we are doing it at probably 15 or 20 powerplants.

Because of the size of this uprating and because of the cost of it, there is an indication among non-Federal developers that they will pay the cost. Most of the operations are just part of our standard O&M and we are doing a number of them all over the country.

The other facility we are talking about is just a matter of traffic and a matter of safety. As you know, the powerplant is below the river. As you know, you go over the dam and the powerplant is down below. There have been a number of safety problems that looked like they would be very, very dangerous if something wasn't done. We have had bad accidents there that could have easily been turned into tragedies.

Senator **Hecht**. Is there any deterioration of the dam itself?

Commissioner **Broadbent**. Not that we aren't taking care of, no. There is a standard inspection program, but that is being done under the O&M program, and all of our dams are involved in it. There is no significant deterioration at Hoover. We have some problems in dam safety which are different, and those will come under the dam safety legislation which is the next bill.

Senator **Hecht**. OK. Thank you.

Senator **Nickles**. Thank you very much. Mr. Commissioner, do you want to take our safety dams bill? I also appreciate the amendments that you have submitted, too, for the hydro bill.

Commissioner **Broadbent**. Mr. Chairman and members of the subcommittee, we are appearing today to support with amendments S. 672 and S. 739, bills which would raise the appropriations ceiling of the Reclamation Safety of Dams Act of 1978 from $100 million to $650 million, and provide for inclusion of certain dams under the authority of the act.

S. 672 also provides authority to replace as well as modify Reclamation dams for purposes of dam safety. S. 739 has an additional provision allowing congressional committee approval of the modification reports in less than the required 60-day period. Since the two bills are so similar, we will comment only on S. 739.

I appreciate the opportunity to describe our current dam safety program and future needs, and to urge adoption of several amendments to the bill which we believe will considerably enhance program management, increase efficiency, and more appropriately distribute costs among beneificiaries.

Federal agencies in general, and Reclamation in particular, are implementing dam safety programs and making decisions consistent with the Federal guidelines for dam safety dated June 25, 1979. Those guidelines call for the selection of flood and earthquake design magnitudes in order to minimize the chance of their being exceeded where loss of human life or significant property damage is a concern. Reclamation's evaluation criteria for existing dams follow those guidelines of determining the existence of a dam safety hazard. A dam safety hazard is defined as a structural, operational, or geographically induced deficiency which could cause or contribute to a dam failure, either with the passage of time or by a specific natural element.

If a dam safety hazard exists, the decision for corrective action would take into account several variables such as the number of people endangered, the ease of evacuation, the opportunity to give advance warning of impending structural failure, the seriousness of significance of the problem, the cost of structural repair, and the feasibility and effectiveness of reservoir operaing restrictions.

Our program emphasis is upon protection of human life and reduction of the potential for economic loss while maintaining project benefits, all with a sharp eye upon the financial impacts to the general taxpayer.

The total estimated cost of the safety of dams program proposed in Reclamation's fiscal year 1984 program is $95.5 million. When similar legislation was considered during the 97th Congress we projected a total estimated cost for work then underway of 129.4 million. The reduction from our previous projection is due primarily to the favorable bids received on construction, reduction in scope of work to be performed on some dams, and reduction in our modification report and preconstruction planning expectations.

Our safety evaluation of existing dams examinations have identified an additional 40 dams that may require safety modifications. An estimated $550 million is needed for that additional work. We, therefore, support the increase to the current appropriation ceiling of 650 million.

To provide for full implementation of the Reclamation Safety of Dams Act, consistent with the President's program for economic recovery, we recommend five amendments to the bill. Specific language for each of our proposed amendments will be provided for the record. In total the amendments will provide for several important aspects of the dam safety program.

They will provide for a realistic management approach to the problems of cost sharing and also will allow us to increase the number of dams we are working on. The proposed amendments provide for elimination of costly reports for minor work. They also provide appropriate authority to perform other corrective work besides structural modification or replacement of dams when that alternative is the least cost solution to a dam safety problem.

Again, Mr. Chairman and members of the committee, I would like to thank you for the opportunity to testify on this bill, and I would be pleased to answer any questions you might have.

[The prepared statement of Commissioner Broadbent on S. 672 and S.739 follows:]

STATEMENT OF
ROBERT N. BROADBENT
COMMISSIONER, BUREAU OF RECLAMATION
DEPARTMENT OF THE INTERIOR
BEFORE THE SUBCOMMITTEE ON WATER AND POWER RESOURCES
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
ON S. 672 AND S. 739 BILLS TO AMEND THE RECLAMATION SAFETY OF DAMS ACT OF 1978

MARCH 24, 1983

Mr. Chairman, and members of the Subcommittee, we are appearing today to support, with amendments, S. 672 and S. 739, bills which would raise the appropriation ceiling of the Reclamation Safety of Dams Act of 1978 from $100 million to $650 million and provide for inclusion of certain dams under the authority of the Act. S. 672 also provides authority to replace as well as modify Reclamation Dams for purposes of Dam Safety. S. 739 has an additional provision allowing Congressional committee approval of modification reports in less than the required 60 day period. Since the two bills are so similar, we will comment only on S. 739.

I appreciate the opportunity to describe our current dam safety program direction and future needs, and to urge adoption of several amendments to the bill, which we believe will considerably enhance program management, increase efficiency and more appropriately distribute costs among beneficiaries.

Federal agencies in general, and Reclamation in particular, are implementing dam safety programs and making decisions consistent with the Federal Guidelines for Dam Safety dated June 25, 1979. Those guidelines call for selection of flood and earthquake design magnitudes in order to minimize the chance of their being exceeded, where loss of human life or significant property damage is a concern. Reclamation's evaluation criteria for existing dams follows those guidelines in determining the existence of a dam safety hazard. A dam safety hazard is defined as a structural, operational or geographically induced deficiency which could cause or contribute to a dam failure, either with the passage of time or by a specific natural event.

If a dam safety hazard exists, the decision for corrective action would take into account several variables such as the number of people endangered, the ease of evacuation, the opportunity to give advance warning of impending structural failure, the seriousness or significance of the problem, the cost of structural repair, and the feasibility and effectiveness of reservoir operating restrictions. Our program emphasis is upon protection of human life and reduction of the potential for economic loss while maintaining project benefits, all with a sharp eye upon the financial impacts to the general taxpayer.

The total estimated cost of safety of dams work proposed in Reclamation's fiscal year 1984 program is $95.5 million. When similar legislation was considered during the 97th Congress, we projected a total estimated cost for work then underway of $129.4 million. The reduction from our previous projection is due primarily to favorable bids received on construction, reduction in scope of work to be performed on some dams and reduction in our modification report and preconstruction planning expectations.

Our Safety Evaluation of Existing Dams examinations have identified an additional 40 dams that may require safety modifications. Frequently, the identified deficiencies exist because older dams were not designed to meet current standards, cannot safely pass newly calculated maximum hydrologic events, or cannot sustain estimated maximum seismic events. Other problems are experienced where dams have reduced life due to deterioration because they were constructed using inferior materials or presently outdated construction techniques. An estimated $550 million is needed for that additional work. We therefore support the increase of the current appropriation ceiling to $650 million.

To provide for full implementation of the Reclamation Safety of Dams Act, consistent with the President's program for economic recovery, we recommend five amendments to the bill. Specific language for each of our proposed amendments will be provided for the record.

Our first amendment would provide authority for the Secretary of the Interior to perform corrective or mitigative actions instead of "modifications" of existing dams. Section 2 of the Reclamation Safety of Dams Act simply gives the Secretary the authority to "perform such modifications as he determines to be reasonably required." In some instances it would be less costly to impose operating restrictions; to acquire potentially flood affected lands; to construct levees, downstream detention dams, or replacement dams; to install flood warning systems; or to purchase the necessary water rights to breach a dam and take it out of service. In many situations, structural modification of an existing deficient dam may be more costly than pursuing an alternate course of action even to the extent of replacing the dam, as proposed in S. 672. Our second amendment simply conforms section 5 of the Reclamation Safety of Dams Act of 1978 with our proposed amendment to section 2 of the Act by substituting a new section 2 for S. 739.

The third amendment would modify the repayment requirements for safety-of-dams work. This Administration is committed to reducing the Federal budget and believes that beneficiaries of Federal projects should, in most cases, contribute to those projects. Our proposed amendment will provide for project beneficiary, State, and local participation in the cost of making Reclamation dams safe. We do not believe that safety costs per se should be exempted from reimbursement or cost sharing. This is appropriate as safety considerations permeate every aspect of dam design and construction. If the dam develops defects over time or if additional work is needed to meet current safety standards, there is no reason to forego that cost sharing or reimbursement that would have been due had the remedial work been incorporated into the initial construction. Moreover, the least costly solution to a safety problem may be less acceptable to local residents than some other solution which would maintain the current level of water service. The long range effects of correcting safety problems without cost sharing or reimbursement is to make all replacement of existing investment free to its users and beneficiaries, and place the total cost on the general taxpayer. Our proposal recognizes that some irrigation districts may not be sufficiently profitable to repay the total allocated cost so the reimbursement amount is limited to the ability to pay. Where ability to pay is not a constraint, we will be discussing with project sponsors the feasibility of their assisting in the financing of this work.

The fourth amendment we recommend would revise section 5 of the Act. The Secretary of the Interior should be exempted from the modification report requirements of section 5 when safety modification costs are estimated to be

$1,000,000 or less. This would relieve the Bureau of Reclamation of the costly and lengthy reporting and approval process and thus increase management efficiency on minor safety of dams modification work.

Our fifth amendment would delete the language concerning Twin Buttes Dam, Texas, and Foss Dam, Oklahoma, from section (b) of the bill. We believe that the foundation treatment, drainage and instrumentation work costs referred to in section (b) should be treated as project costs in accordance with the original project authorizations.

In total, the amendments will provide for several important aspects of the dam safety program. They will provide for a realistic management approach to the problem of cost sharing and also will allow us to increase the number of dams we are working on. The proposed amendments provide for elimination of costly reports for minor work. They also provide appropriate authority to perform other corrective work beside structural modification or replacement of dams when that alternative is the least cost solution to a dam safety problem.

Again, thank you for the opportunity to discuss the Reclamation dam safety program and to recommend amendments to your current proposal. I would be pleased to answer any questions you have.

SUGGESTED DEPARTMENT OF THE INTERIOR AMENDMENTS TO S. 739

1. (c) Section 2 of the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471) is amended by striking all after "authorized" and inserting in lieu thereof:

> "to provide for the correction of dam safety deficiencies in Bureau of Reclamation dams through construction of corrective works or other measures as he deems necessary. The Secretary is further authorized to provide for such dam safety hazard mitigation alternatives in lieu of constructing corrective works or in addition to such construction as he determines to be economically justified. Said performance of work shall be in accordance with the Federal Reclamation laws (Act of June 17, 1902, 32 Stat. 388, and acts amendatory or supplementary thereto)."

2. Delete section (a)(2) and insert in lieu thereof the following:

(2) Section 5 of the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471) is amended by striking all after the words "for carrying out actual construction" and inserting in lieu thereof:

> "for work performed under authority of this Act prior to sixty days (which sixty days shall not include days on which either the House of Representatives or the Senate is not in session because of adjournment of more than three calendar days to a day certain) from the date the Secretary has transmitted a report on such existing dam to Congress, provided that an obligation made pursuant to the preceding proviso may be made prior to the expiration of sixty days in any case in which the respective committees of jurisdiction in the House of Representatives and the Senate approve an earlier date and notify the Secretary in writing, of such approval. The report required to be submitted by this section will consist of a finding by the Secretary that such work is required in order to insure safety of the existing dam or to prevent the loss of human life and property damage. Such finding shall be accompanied by a technical report containing information on the need for corrective work or hazard mitigation, alternatives considered, the estimated cost of the proposed action, and environmental impacts

if any resulting from implementation of the recommended plan."

3. (d) Section 4 of the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471) is deleted and the following is substituted in lieu thereof:

> "SEC. 4.(a) Costs hereafter incurred in the performance of safety of dams work under this Act shall be allocated in proportion to total benefits to current functions served by the dam, project, unit, or division, as determined by the Secretary at the time of completion of the work undertaken pursuant to this Act. Costs allocated to irrigation water service and capable of being repaid by the irrigation water users shall be reimbursed within 50 years of the year in which the work undertaken pursuant to this Act is substantially complete. Costs allocated to irrigation water service which are beyond the water users' capability to repay will be nonreimbursable. Costs allocated to recreation or fish and wildlife enhancement shall be reimbursed by the State or States in which the dam is located or by other non-Federal project sponsors.
>
> (b) Costs allocated to municipal, industrial, and miscellaneous water service, commercial power, and recreation and fish and wildlife enhancement shall be repaid within 50 years with interest. The interest rate used pursuant to this section shall be determined by the Secretary of the Treasury, taking into consideration the average market yields on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the reimbursement period, during the month preceding the fiscal year in which the costs are incurred for work undertaken pursuant to this Act. To the extent that more than one interest rate is determined pursuant to the preceding sentence, the Secretary of the Treasury shall establish for repayment purposes an interest rate at a weighted average of the rates so determined.
>
> (c) The Secretary is authorized to negotiate appropriate contracts with project beneficiaries providing for the return of reimbursable costs through water charges, ad valorem taxes, account charges, or other means he deems appropriate.
>
> (d) Costs incurred in performance of periodic safety evaluation inspection and analysis, and preparation of modification reports for the Congress, shall be nonreimbursable and nonreturnable under Federal reclamation law. Fifty percent of costs incurred in the preparation of project design shall be paid by project beneficiaries in advance of construction."

4. (e) Following the word 'funds' on line 5 of section 5 of the Reclamation Safety of Dams Act of 1978 (92 Stat. 2471), insert the words 'exceeding $1,000,000'.

Senator NICKLES. Thank you very much, Commissioner. You mentioned, what, an additional 40 dams?

Commissioner BROADBENT. Yes, sir, and I think we provided it for the record. If not, we would be happy to provide it for the record.

Senator NICKLES. We would appreciate a list of those, and do those have estimated costs involved, too?

Commissioner BROADBENT. Yes, sir. We will provide that, and we can provide you with what we feel are the problems with them.

Senator NICKLES. OK, and you also mentioned—I would appreciate that for the record, and you also mentioned reevaluation of your current program in 1984 and a lower contract cost.

Could you give us a rundown of those for the record—not necessarily item-by-item?

Commissioner BROADBENT. OK. We can provide that for the record. In general, it was because we are getting bids on our dam safety program about 25 percent less than our estimate, and we have streamlined some of our administrative costs.

Senator NICKLES. One of your amendments I believe goes into the cost sharing aspect?

Commissioner BROADBENT. Yes, sir.

Senator NICKLES. Would you care to discuss that for a moment?

Commissioner BROADBENT. Well, the amendment provides that the beneficiaries of a program to rehabilitate or to bring a dam up to the safety standards required under the act or the procedures that we have adopted should pay their proportionate share of the cost of rehabilitation.

Senator NICKLES. Would this include rehabilitation that possibly was found necessary due to an original construction defect?

Commissioner BROADBENT. Yes, sir.

Senator NICKLES. Many would argue that that shouldn't be borne so much by the beneficiaries as much as by the Government as they were building the dam and found it to be less than adequate.

Commissioner BROADBENT. That is correct.

Senator NICKLES. How would you refute that?

Commissioner BROADBENT. Well, the administration feels that beneficiaries, where we can define the beneficiaries, should pay for their proportionate share of the dam safety work.

Senator NICKLES. There is an enormous amount of money and attention that would be going into some of the several dams in Arizona.

Could you elaborate on some of the problems that they are having in Arizona?

Commissioner BROADBENT. Well, the main river system that feeds into Phoenix is the Salt Verde System. There are five or six dams on that system. One major dam, if it were to fail—Roosevelt Dam—under certain conditions, could cause multi-million dollars worth of damages below the dam

In order to meet the dam safety requirements of those five or six dams we are talking about several hundred million dollars.

Senator NICKLES. So if we went up to the 650 million figure, would this take care of the dams that are under the Bureau to bring them up to that standard?

Commissioner **Broadbent**. It is our estimate that it would take care of the 13 that we presently are working on, plus the 40 that are on the list, which you have. All of the reclamation dams in Arizona which have safety problems are on that list.

Senator **Nickles**. And that amount of money would take care of all those dams?

Commissioner **Broadbent**. Yes, sir—our present estimate; it has gone up and it has gone down, but those are our present estimates. In fact, we can furnish you the present estimate for the costs of all 40 of those dams for the record.

Senator **Nickles**. I would appreciate that very much, and you also mentioned that you have an amendment that would delete language concerning the Twin Buttes Dam and also the Foss Dam. Could you elaborate on those?

Commissioner **Broadbent**. Foss Dam is an earth fill dam. It is subject to the maximum probable flood which would probably be over the top and failure.

There is also a potential for foundation liquefaction if the maximum earthquake should occur. The cost to modify this structure under the safety of dams program is about $3 million.

However, there is also an additional problem of foundation seepage which creates a potential for piping, the artisian pressure to be relieved by construction of a deep-toe drain and pressure relief wells. That work should not come under the dam safety program but be treated as a project cost. I think the problems at Foss Dam and Twin Buttes Dam are quite similar. They were both added by the House or Senate to the safety of dam bills last year and are in one of these bills this year.

Senator **Nickles**. What was your recommendation?

Commissioner **Broadbent**. Our recommendation was at that time that both of those be paid for by the beneficiaries.

Senator **Nickles**. A hundred percent of that repair cost?

Commissioner **Broadbent**. Yes, sir, the repair cost but not the cost of hydrology or earthquake necessitated work.

Senator **Nickles**. It is getting close to home. Do you realize that?

Commissioner **Broadbent**. Yes, sir, I do.

Senator **Nickles**. Senator McClure?

Commissioner **Broadbent**. Listen, this whole safety of dam thing gets very nervous.

Senator **Nickles**. Senator McClure?

The **Chairman**. I think it is fair to observe that nervousness is on all sides.

Commissioner **Broadbent**. Yes, it sure is.

The **Chairman**. One of the concerns that I have, of course, must be that we should look first at the safety requirement. The second consideration should be how it is paid for. I think we have played with the safety of the American people to long in some of these instances already.

We have been lucky. Now I am not suggesting to anyone that these dams are subject to immediate failure, but when you identify problems that need to be corrected that have imminent chance of failure, that they ought to be corrected. When it is the kind of thing that you last referred to, the change of design criteria that increases the margin of safety where there is a safety margin already, we just desire to increase it, perhaps we can then be a little more deliberate in approaching it.

The people of Idaho will not forget the reclamation dam that failed in Idaho. The dam was completed in November of 1975, and as it was being filled in the spring of 1976, it failed. Eleven people lost their lives and we were incredibly lucky that it was not more than that because the failure occurred on a bright, sunny Saturday morning just before noon on that day. They had an opportunity to give warning by radio to people below the dam to get out of the way, the water was coming. If it had occurred in the middle of the night, there would have been hundreds of people who lost their lives. Our attention was focused on the potential for havoc to entire communities, not just some inconvenience or loss of property, but widespread human disasters as a result of failure, and I have been very, very much concerned about the issue of safety of dams ever since that time. That event caused me to focus on that problem, and I am afraid we are too much involved in budgetary pressures and budgetary philosophy and in wrangling over details rather than getting the job done where that job has to be done.

Now I am also concerned that when we change design criteria we begin to affect more than just safety. Every project is subject to a cost analysis prior to its authorization. Everyone has a chance to look at what that cost of the project will be, what the burden will be upon the users, and they can all sign up or refuse to sign up based upon full knowledge of what they are going to be required to pay.

Design changes or design errors in the first place can lead to redefinition of the project costs in such a way that it dramatically changes the cost to the people who are the supposed beneficiaries of the project.

Aren't we in danger in some of these instances of imposing just that kind of a burden on people who thought they knew what their liability was and suddenly find it changed, not because of any action of their own part, but because of the act of the Federal Government?

Commissioner **Broadbent**. I would, I guess, Senator McClure, have to say yes. The whole issue as we have discussed it in the administratin of dam safety, as you are aware, for the past year and a half is very, very touchy and very tough. I don't think there is any question that we have to fix those dams if there is a safety hazard for the people of this country. We should take whatever steps are necessary to make them safe. Just in economics alone it would make sense because of the cost the Federal Government bore in the tragedy that we had when we lost the dam in your State. In my opinion, we have to fix the dams, recognizing that we have to fix them and still trying to picture a fair way of having beneficiaries pay has been very, very tough.

We have tried lots of amendments. We have tried lots of ways, and we probably are no closer today with this legislation than we were a year or so ago in my opinion, but I do think that this administration should do its best to attempt, if there is the ability of beneficiaries to pay, and we can identify those beneficiaries, to find a way to have them pay for the cost of rehabilitation.

Now if it is a matter of safety and we can't do that, then I think we ought to fix it.

The **Chairman**. In any project we build these days we look at the ability of beneficiaries to repay that, certainly in the case of irrigation water.

Commissioner **Broadbent**. Yes. We look at their ability to repay and assess their charges on the basis of that ability to pay.

The **Chairman**. That is in your proposed amendment to this bill for irrigation people, so you would look to the power revenues for the replacement, for the safety as well? That is the usual place we revert to pay that amount.

Commissioner **Broadbent**. As I read it, ability to pay says that in the case of irrigators they would be asked to pay only up to their ability to pay. And, it does say that M&I and power users, if you can say that they are a beneficiary of making that dam safe, should pay for their share, but it doesn't say they should pay for somebody else.

The **Chairman**. If you can't identify those benefits, the amount in excess of irrigators' ability to repay would be nonreimbursable cost?

Commissioner **Broadbent**. It would be a nonreimbursable cost.

The **Chairman**. In light of your statement—and I think you are right. We need to get it done. In light of that statement, doesn't it make sense for us to try to expedite getting this done?

I think you earlier in response to a question from the chairman indicated that a recent contract award went for some 25 percent below the estimate of cost. I think everyone knows in this recession that an awful lot of people out there are looking for work. The contractors are hungry for jobs. It is a favorable climate in which to let contracts, it it not?

Commissioner **Broadbent**. In general, our bids are coming in throughout reclamation about 20 to 25 percent under our estimates.

The **Chairman**. It would seem to me that is a good time to get as many of them under contract as is possible.

Commissioner **Broadbent**. It is an excellent climate.

The **Chairman**. We tried to get safety of dams included in the jobs bill and we were unable to because of the wrangle over repayment, and we may miss that window of opportunity simply becuase of the philosophical argument about who ought to pay. Meanwhile we are throwing money at jobs across the spectrum without reference to the usual rules.

It would seem to me then, and I'm sorry to miss the opportunity to get that into the bill upon which the Congress is just now completing action, with a little more flexibility on the part of the administration we might have made that.

Commissioner **Broadbent**. I will be glad to see what we can do to express those concerns, Senator. I think we are hearing those from a number of people.

The **Chairman**. In your first amendment, if I understand them correctly, you would impose operating restrictions where that is costly?

Commissioner **Broadbent**. Well, we would ask for the full realm of authority—operating restrictions, construction, advanced warning systems—the full realm, even to buy out the water rights and breach the dam or something like that. We asked for the authority. We are looking for the authority to solve it in the least costly way and with the idea that we are going to have to sit down with all the people and work it out.

The CHAIRMAN. How do you determine what is the least costly way? How do you determine the cost of reducing effective storage?

Commissioner BROADBENT. I think that has personally bothered me more as we have done that on some of our resources. As you are aware, we have several that affect your State where we have reduced the storage capacity, and you know, I am not so sure that we have done a very good job of that, of really looking at the costs from the reduction.

The CHAIRMAN. That concerns me because I share the feeling that perhaps we have not done that as well as we could, but if we are going to apply that more broadly to an ever-widening group of dams, then we need to be more careful about what we are doing. After all, that water does not belong to the Federal Government.

Commissioner BROADBENT. No, sir, it sure doesn't.

The CHAIRMAN. It does belong to the individuals, that is, the recipients of the water, and they have acquired water rights pursuant to State statute.

Commissioner BROADBENT. That is correct.

The CHAIRMAN. The actions that you take in requiring the operating restrictions that reduce effective storage effectively deprives them of the opportunity to utilize their water rights.

Commissioner BROADBENT. That is correct.

The CHAIRMAN. And as a matter of fact, in almost every instance in which you are acting, those operating restrictions are on top of an operating contract.

Commissioner BROADBENT. That is correct also.

The CHAIRMAN. What you propose is a unilateral change of conditions on which the people on the other side have little or nothing to say, isn't that correct?

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. I would think the Federal Government ought to be a little cautious about unilateral changes in a contract that has people on the other side.

Commissioner BROADBENT. I agree with you.

The CHAIRMAN. Some people out there believe that what you are doing in operating restrictions is simply blackmail to get them to agree to the reimbursable contract.

Now if you were sitting in their shoes, can't you imagine that perhaps you might feel that way, too?

Commissioner BROADBENT. I think that I might be hollering the same kind of language.

The CHAIRMAN. I note that you would include acquisition of flood-affected land. How are you going to apply that and how are you going to apply that cost?

Commissioner BROADBENT. I don't know that we would. We know if it was a small dam or something like that and you had a problem and it costs an awful lot of money, and if that land was largely nonproductive, that might be something you could look at.

I think we just are trying to broaden our perspective so that we can look at all solutions as we try and solve the problem.

The CHAIRMAN. I don't think anybody minds you looking at them. What they are afraid of is that you may apply them.

Commissioner BROADBENT. Yes. I don't blame them. I remember when I used to think Government didn't care what any of us thought back home until I came back here and had to look at it from the other side.

The CHAIRMAN. I'm glad you still remember.

Commissioner BROADBENT. I sure do remember it, and I think about it every day, and when I quit remembering, I hope they send me home.

The CHAIRMAN. We may do that.

Senator HECHT. Maybe we don't want him.

Commissioner BROADBENT. Were you smiling when you said that, Senator?

The CHAIRMAN. If you forget.

Commissioner BROADBENT. If I forget.

The CHAIRMAN. I remember an instance on the Payette River just above where I live about 40 miles on the Black Canyon Dam, because of the impoundment of the water, the river channel has silted up at the entrance into the reservoir, and because of that siltation it no longer will carry as much water as it used to carry. Therefore, the normal runoff in the spring causes more extensive flooding of the land above that reservoir.

The Bureau's answer has been it is cheaper to buy the land than it is to clear the channel. It seems to me that the people who have that land have a right that the Government not do what they are doing by flooding their land and then saying well, it is cheaper to flood your land than it is to fix the problem.

It is the same thing in a little different sense that applies here. I think we have a stewardship ethic that says it is better for us to take care of land than it is to allow destruction, and I believe that if I understand Secretary Watt, that is very near to the core of his philosophy with respect to the management of public land.

If that is true of our management of the public lands, do we have a right to be less concerned about the private lands?

Commissioner BROADBENT. I think we ought to be consistent. There is no question about that.

The CHAIRMAN. And that would indicate that you don't just allow the flooding of the land as an alternative to voiding it, at least not as a matter of general rule. It would be an exception I would think rather than the general application.

Commissioner BROADBENT. I would hope so.

The CHAIRMAN. Just out of curiousity, if you were talking about buying the land in order for it to be flooded, what would that cost in the case of the Theodore Roosevelt Dam above Phoenix?

Commissioner BROADBENT. I don't even think we could put a cost figure on it. Certainly in that case it is far more cost effective to repair the dam or to make whatever structural changes we would have to do because it is near a flood plain where a major catastrophy on one or those dams would take out hundreds of millions of dollars.

The CHAIRMAN. Now the authority given to you under the Reclamation Act says that whatever water you acquire you acquire pursuant to State law for a project?

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. You are proposing in this instance to be able to acquire water rights as an alternative to fixing a dam.

Isn't that a departure from the process that we followed over 70, well, nearly 80 years?

Commissioner BROADBENT. We would do it according to State law. We purchase water rights for water projects, and when the water projects are built, of course, water rights go, by contract to those beneficiaries.

The CHAIRMAN. In this instance you are going to breach and affect a dam. You purchase the water rights in order to be able to do that.

What are you going to do with the water rights afters the dam is breached?

Commissioner BROADBENT. Well, many of those are water rights that are based on storage, and if you don't have the storage, then the water isn't there to be used anymore because you have breached the dam.

The CHAIRMAN. Would it in effect then be allowed to lapse, go back into the State inventory?

Commissioner BROADBENT. I would imagine it would, yes, sir, because there wouldn't be any storage right there, and you would have to build another facility and create that storage so that you have a water right that you would be able to sell or market, or contract, or whatever.

The CHAIRMAN. Mr. Commissioner, I notice you indicate in your statement that if a dam develops a defect over time, related costs should be cost shared or reimbursed.

The change in design criteria because of seismicity or design for floods is not a defect that has developed over time. That existed the day the dam was completed. Is that not correct?

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. Shouldn't that be treated differently than those that might have indeed developed over time?

Commissioner BROADBENT. I would think that should be considered.

The CHAIRMAN. Am I not also correct in stating that Secretary Watt has stated that any cost-sharing proposals that the administation may come up with would not apply to authorized projects?

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. Isn't dam safety already authorized?

Commissioner BROADBENT. Well, the projects that are being repaired are already authorized and the dam safety program was authorized.

The CHAIRMAN. If we were to be consistent, it wouldn't apply then to this program?

Commissioner BROADBENT. Well, certainly——

The CHAIRMAN. Unless we make an exception?

Commissioner BROADBENT. Certainly you can apply it to the original ones that were authorized in the Dam Safety Act, but if we add new ones, I don't know technically where that would fall, but I think it should be looked at.

The **Chairman**. Mr. Commissioner, I will submit a number of other questions for the record rather than taking the time of the committee at this particular time.

I know that you know where I am coming from. I think I know where you are coming from. We do have a very difficult question here, but these projects were not designed by the recipients. The were designed by the Government. They weren't built by the beneficiaries. They were built by the Government. They were paid for by the beneficiaries, and they are owned by the beneficiaries in some cases. In some cases they are still owned by the Federal Government, so I think we have a very difficult problem when we start trying to change a relationship in which Government has been the dominant partner and we do so unilaterially and without any opportunity really for the people out on the other side to negotiate.

I sympathize with your position and I can understand, too, the problems that you have as we all have in trying to work with OMB.

Thank you.

Senator **Nickles**. Thank you, Senator.

Commissioner **Broadbent**. Mr. Chairman, if I might I would like to say to Senator McClure before he goes that it would be my hope that we might be able to work with you and with the members of this committee in working on a bill that we could get through Congress this year, and I think we are going to be susceptible to any amendments you may have and to work with you closely on it throughout the process.

The **Chairman**. Thank you.

Senator **Nickles**. We appreciate your coming, Senator.

Senator **Hecht**. Commissioner, you have here that 40 dams require safety modifications. Again back to what I asked you before, what has happened in the last few years on this? Why is it all coming about now? Has there been any plan the last few years on safety modification.

Commissioner **Broadbent**. As a result primarily of the Teton Dam failure in Senator McClure's State, there came a public outcry about dams safety.

When we all started to look at that problem as a result of that, we felt we had new criteria for dams and dam safety. We started to look at new maximum probable floods and seismic problems and a lot of other things. We started to look at our own design criteria for dams, and it has been modified greatly to hopefully prevent any kind of a problem like happened with Teton and to prevent that from ever happening again.

Then we started to go out and evaluate all our dams. In the case of the Bureau of Reclamation, we have about 310 dams or impoundment facilities. We looked at those that we thought had the highest probability of problems, and most of it as a result of new technology where you find things like liquification where the dam foundation would actually slip out from underneath the structure. We looked at flood and seismic problems. We did actually find some design problems. We have been able to go back and look at dams like at Lake Tahoe, which is one of the dams that is in the safety bill, or the dam at Rye Patch in your State or the one at Lahontan. Work is presently underway to make it safer. Those dams were built in the early 1900's, and we have those where in the early days the concrete wasn't as strong and safe as the concrete we have now. It would just crumble. There wasn't any such think as the kind of concrete or some of the other things that we have now, and it is a serious problem, and there is no question in my mind but that it has to be taken care of.

It is just how it is done, and as I say, we have four of them in your State and Senator McClure has a number, and I believe Senator Nickles has three or four in his State. I imagine in many of those States there would be corps dams also that have identified problems, and I would say that the corps and the other entities in Government are looking at this as the precedent for what they are going to do with their dams. That is what we are being told, so I think that this is important. We are getting the first glimpse of what is probably going to be coming down the pike as we look at the problems in other areas, particularly corps dams.

Senator HECHT. Where these problems exist, do we have any choice?

Commissioner BROADBENT. I don't think we have any choice but to repair the dams. I think the argument is how and with whose money?

Senator HECHT. You have had a tough morning. I know I have been with you since 8 o'clock this morning. They badgered you and then you came into this meeting at 10, so I think that's enough.

Senator NICKLES. Just one additional comment, Commissioner—in looking at the chart that we have, it shows the preliminary results of dam safety investigation work, and looking at the total, and that was out of the hundred million dollars original authorization, it shows a total of $38.6 million for modification reports and preconstruction planning. That seems to be abnormally large—40 percent of total funds. That figure seems to be astronomically large.

Commissioner BROADBENT. Recognizing we have been looking at all 300 of our dams, it is high. In some of our facilities, it's for preconstruction work. Also, as we look at the alternatives, we might identify six or seven alternatives on how to fix a dam.

If I could, on Roosevelt, for instance, Roosevelt is in the Salt River—there are two better witnesses for this than me, but Roosevelt is one of the top dams, and there are two or three dams below it. If you fix Roosevelt and don't make it big enough, then you have got to fix the two dams below. If you make it big enough, then you don't have to worry about the two dams below because there won't be a safety problem. It may be cheaper at Roosevelt not to fix the original dam, which is a dam built in 1902 and it is a beautiful dam built with blocks.

It would be cheaper to not fix that dam but to build a new dam, and then all of the geology and all of the seismicity that you have to look at to evaluate these dams is costing us a lot of money. That was one of the things what we were concerned about as we have cut those costs out, as we took it down from 129 million down to 95; 14 million of that was just what we considered preconstruction planning that we estimated that we didn't have to do. We are getting a little better at it, I guess I would say.

Senator NICKLES. How many dams do you have?

Commissioner BROADBENT. 310.

Senator NICKLES. Do you know how many the corps has?

Commissioner BROADBENT. About 600.

Senator NICKLES. Commissioner, thank you very much. Senator McClure, do you have a followup question?

The CHAIRMAN. I should have asked for the record, with respect to the Jackson Lake Dam, a lot of people think Jackson Lake is a lake just because it is beautiful and it is within Teton National Park. I have asked for some years that we put up a sign that called it Jackson Reservoir which it really is.

It is there because it was created by irrigators in Idaho.

Commissioner BROADBENT. That is correct.

The CHAIRMAN. So all those tourists that go to Teton National Park to look at the beautiful view of the Tetons across beautiful Jackson Reservoir need to be reminded that if, indeed, we do something here in safety of dams, and that is one that is indentified, one of the options is breaching the dam and draining it, that all the visitors to the lodge at Teton would have nothing but mud flats in the foreground across the view of the mountain, so I assume that Jackson Reservoir is not one in which you would utilize the option of breaching the dam and draining it.

Commissioner BROADBENT. Not while I'm here, Senator.

The CHAIRMAN. But it has been identified as being in need of rebuilding because of the seismicity, and the fact that under the very heavy seismic shock, the dam might fail.

Commissioner BROADBENT. Yes, sir.

The CHAIRMAN. I believe you have indicated that you are going to go to public hearings in the area affected to present the evidence and your point of view and to seek the point of view from the people that are involved?

Commissioner BROADBENT. Yes, sir, and we have four or five options.

The CHAIRMAN. Have you identified the date and the place of those hearings?

Commissioner BROADBENT. Yes, sir, and I have it here. If I could, I would like to put it in the record.

We have reserved meeting rooms in Idaho Falls, Idaho, on May 31, 1983, and Jackson, Wyo., on June 1, 1983, to hold general information meetings with the public.

Then, on June 21, 1983, Idaho Falls, Idaho; on June 22, 1983, in Jackson, Wyo., we will involve the public in workshops to further define problems and concerns. It is our intention that we be in contact with the public at least once a month either with meetings or by mailing out information packages, or newsletters.

After our April mailouts to some 400 interest groups, we shold find out if it will be necessary to hold meetings in areas outside the Jackson Lake Dam area. We hope to hold a press conference about the first of November in 1983 to announce the tentative alternative modification of Jackson Lake Dam and present our draft environmental impact statement to the public in about mid-February 1984.

The **Chairman**. Thank you very much. Thank you, Mr. Chairman.

Senator **Nickles**. Commissioner, thank you very much for your appearance before the committee. There may be additional questions that we would submit to you.

The **Chairman**. I should state on the record that my earlier comment about we may just sent you home was totally flippant. We have no such desires.

Commissioner **Broadbent**. I enjoy the job, but I'm ready to go home.

The **Chairman**. We think very highly of you and think you are doing a very fine job.

Commissioner **Broadbent**. Thank you very much.

[Subsequent to the hearing, Commissioner Broadbent submitted the following:]

United States Department of the Interior
BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY
REFER TO: 230

MAY 13 1983

Honorable Don Nickles
Chairman, Subcommittee on Water and Power
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Nickles:

This responds to your requests during the hearing of the Subcommittee on Water and Power on March 22, 1983. We have enclosed a list of Reclamation dams possibly requiring modification for safety reasons and an estimate of the costs of these modifications.

We have also been requested to describe the reevaluation of our current program for fiscal year 1984. The safety of dams modification study and report preparation process is requiring more time to complete than earlier estimates had indicated. Also, we have recently reorganized and streamlined our processes. Consequently, our fiscal year 1984 budget request has been reduced from $7,177,000 to $3,585,000.

Another example of our curtailed program is the installation of instrumentation in dams. Our 1981 fiscal year 1984 estimate was $1,000,000. The current fiscal year 1984 estimate is $150,000.

One further example of our program reevaluations is a $21.4 million proposed safety of dams construction program in our 1982 preliminary budget data for fiscal year 1984. During our preliminary budget process for fiscal year 1985, it now appears that this figure has been reduced to $17.7 million.

Construction contract costs of $1 million or more, for the period of October 1982 through March 1983, have averaged 15.1 percent below our engineer's estimates. This represents a reduction of $27.5 million in our anticipated expenditures for that period.

If you need any other information, please let us know.

Sincerely yours,

Jed D. Christensen

FOR Robert N. Broadbent
Commissioner

Enclosure

MAR 2 2 1983

PRELIMINARY RESULTS OF DAM SAFETY INVESTIGATION WORK
BUREAU OF RECLAMATION

I. Distribution of initial Safety of Dams Act appropriation ceiling:

State/Dam	Description of Modification	Estimated Cost In Millions
Arizona		
Stewart Mountain Dam	Seismic and hydrologic modifications	$ 8.9
California		
Stony Gorge Dam	Structural modifications to withstand overtopping and seismic forces	7.3
Idaho		
Black Canyon Dam	Construct auxiliary spillway	5.6
Island Park Dam	Raise dam crest, modify spillway crest, and construct berms on the downstream faces of the embankment and dikes	5.1
Montana		
Gibson Dam	Structural modification to withstand overtopping	3.2
Lake Sherburne Dam	Raise dam crest	3.5
Willow Creek Dam	Modify spillway	.6
Nevada		
Lahontan Dam	Rehabilitate spillways and outlet works	6.8
South Dakota		
Deerfield Dam	Raise dam crest and replace spillway	5.9
Utah		
Hyrum Dam	Construct auxiliary spillway and a berm on the downstream face of the embankment	.8
Wyoming		
Guernsey Dam	Rehabilitate spillway	2.2
Jackson Lake Dam	Stabilize embankments for liquefaction	7.0
Modification Reports and Preconstruction Planning		38.6
	Subtotal	$ 95.6

II. Anticipated future work to be performed under the Safety of Dams Act.

Arizona	
Bartlett Dam and Horseshoe Dam	Structural modification will be minor on Bartlett Dam and Horseshoe Dam will be eliminated if Cliff Dam is constructed
Horse Mesa Dam and Mormon Flat Dam	Structural modification will be minor if Theodore Roosevelt Dam is modified or replaced

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State/Dam	Description of Modification	Estimated Cost In Millions
Arizona		
Theodore Roosevelt Dam	Foundation treatment, spillway modification	
Stewart Mountain Dam	Additional requirement over programmed amount	
	Total	$380.0
California		
Casitas Dam	Foundation liquefaction modification	5.0
Folsom Dam	Inflow design flood (IDF) and seismic modification	10.0
Friant Dam	Replace portions of the top of dam and protect dike and abutment for IDF	2.5
Glen Anne Dam	Rehabilitate asphalt lining and underdrain, repair slides on upstream face	1.5
Lake Tahoe Dam	Rehabilitate spillway structure, and provide IDF, seismic, and seepage stability protection	5.0
Stampede Dam	Embankment stability modification	2.0
O'Neill Dam	Embankment stability modification	5.0
Shasta Dam	Grout contraction joints in dam	0.5
Trinity Dam	Possible modification to left abutment slide to prevent blocking or plugging of spillway	1.0
Colorado		
Fruitgrowers Dam	Spillway replacement and embankment stability modification	2.5
Olympus Dam	Inflow design flood modification	10.0
Idaho		
Soldiers Meadow Dam	Rehabilitate spillway and modify embankment for IDF and seepage	2.5
Palisades Dam	Embankment stability modification	10.0
New Mexico		
Navajo Dam	Embankment stability and seepage control	2.0
El Vado	Hydrologic and stability modifications	3.0
Nevada		
Rye Patch Dam	Foundation/embankment stability modification	4.0
North Dakota		
Heart Butte Dam	Inflow design flood modification	3.2
Jamestown Dam	Inflow design flood modification	10.0

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State/Dam	Description of Modification	Estimated Cost In Millions
Oklahoma		
Altus Dam	Hydrologic modification	$ 2.0
Arbuckle Dam	Inflow design flood modification	2.5
Foss Dam	Inflow design flood and structural stability modification	3.0
Oregon		
Cold Springs Dam	Modify seepage control system IDF and structural stability modification	0.5 3.0
Owyhee Dam	Repair top 75 feet of arch	10.0
South Dakota		
Pactola Dam	Raise dam crest and modify spillway	10.0
Texas		
Twin Buttes Dam	Inflow design flood modification	5.5
Utah		
Joes Valley Dam	Provide additional spillway structure Embankment stability	3.0 5.0
Newton Dam	Modify spillway and seismic modification	2.0
Washington		
Bumping Lake Dam	Modify spillway structure and correct foundation seepage	3.0
Wyoming		
Jackson Lake Dam	Additional requirements over funds programmed	34.2
	Subtotal	$543.4

III. Safety of dams work resulting from possible amendments to the Reclamation Safety of Dams Act.

Idaho		
Little Wood River Dam	Structural stability	1.0
Montana		
Como Dam	Structural stability	1.0
Oregon		
Fish Lake Dam	Modify spillway and grout tunnel	1.0
Fourmile Lake Dam	Structural stability	1.0
Ochoco Dam	Rehabilitate spillway and seepage control	5.0
Savage Rapids Diversion Dam	Structural stability	1.0
Warm Springs Dam	Structural stability	1.0
	Subtotal	$ 11.0

Estimated total required for safety of dams modification work: $650.0

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Senator **Nickles**. Thank you very much. Our next panel that we have is Ed Osann, director of the National Wildlife Federation's Water Resources program.

Mr. **Osann**. Thank you, Mr. Chairman. I have a statement that is about six pages in length, and I won't attempt to read the entire text of that statement.

Senator **Nickles**. Thank you very much.

STATEMENT OF EDWARD R. OSANN, DIRECTOR, WATER RESOURCES PROGRAM, NATIONAL WILDLIFE FEDERATION

Mr. **Osann**. I am the director of the National Wildlife Federation's Water Resoures program. The federation is the country's largest conservation organization.

During the past decade we have adopted more than 50 resolutions establishing Federal policy on various aspects of water conservation and development. We have been actively involved in some of the legislation pending before the committee this morning, and we appreciate the opportunity to testify on the willingness of the subcommittee to hold these hearings.

The comments today will be directed to the proposed Reclamation Safety of Dams Act amendments and the reclamation hydropower expansion bill. Any additional comments that we may have on the Belle Fourche rehabilitation bill we would appreciate the opportunity to provide for the record.

Senator **Nickles**. Certainly.

Mr. **Osann**. I would like to say at the outset that we strongly support the timely implementation of dam safety improvements to reclamation facilities. We regret that such legislation was not enacted into law in the 97th Congress, and we are pleased that the subcommittee has scheduled an early hearing for pending legislation proposing amendments to the Safety of Dams Act.

During the last Congress this committee failed to include the repayment provisions sought by the administration when reporting the dam safety bill in the 97th Congress. This action would have rendered virtually the entire half billion dollar authorization a non-reimbursable expense to be borne by U.S. taxpayers at large. The two bills now before the subcommittee would also leave the tab for dam safety with the Federal Government. We feel that the failure to require reimbursement for dam safety costs will only exacerbate the present level of underpricing of water and power from reclamation projects, and the reason for our involvement in this bill as conservationists is that we are concerned that such underpriced resources tend to be wasted rather than used wisely.

Mr. Chairman, much of the argument against requiring reimbursement of dam safety costs appears to us to stem from confusion over whether to consider dam safety a cost or a benefit. Dams are not built for the purpose of providing dam safety. Dams are built for the purpose of providing water supply, flood control, hydroelectric power, and so forth. Clearly dam safety is a cost. It is not a separable project benefit, and the safety and stability of structure is a prerequiste for the realization of project benefits—water power and so forth—over the life of the project.

Certainly people downstream will benefit from a safe dam upstream, but the same can be said for people exposed to any other environmental risk such as air or water pollution. Generally the approach of our policies in this area has been to require those facilities to internalize pollution control costs and so on within the costs of goods and services produced at such sites. In our judgment, this is the way our free market economy works best, and depatures from such cost accounting for dam safety will only result in further misallocation of water and power resources.

Just a few things to point out at this time—the reimbursement for reclamation dam safety improvements has been sought by both the Carter and the Reagan administrations. I would say although they looked at this program from substantially different perspectives, they reached substantially the same conclusion.

Second, the Army Corps of Engineers seeks reimbursement for dam safety improvements at corps dams in the same manner as the costs of the original dam and in generally the same manner as would be proposed by the administration's recommended proposal before this committee, and with your permission, Mr. Chairman, I would like to submit for the record the engineers' regulation of the Army Corps of Engineers regarding dam safety costs, ER-1130-2-417, requiring reimbursement for dam safety expenditures.

Senator NICKLES. Certainly.

Mr. OSANN. With regard to the specifics of the various proposals before the subcommittee, we generally concur with the administration position with two exceptions.

On the subject of reimbursement we would like to see dam safety costs repaid in accordance with existing reimbursement provisions in existing law. This subject came up earlier in response to a question by Senator McClure. The text of the administration's proposal would allow costs allocated to irrigators in excess of a billion to be designated as nonreimbursable, and rather than open up a new area of nonreimbursement, we would recommend that costs in excess of a billion may be repaid in accordance with existing law.

And second, we would also propose that costs allocated to recreation, fish and wildlife purchases be repaid in accordance with existing law which would be the Federal Water Project Recreation Act.

Finally, we note that S. 739 makes no reference to replacement. We generally prefer the administration's language which would allow for a wide array of measures, both structural and nonstructural.

We also note that provides a flexibility to respond to the concerns that were expressed by Mr. Neufeld earlier this morning about the cost of recommended design criteria. We support the idea of the Bureau having the full array of options before it to resolve dam safety problems and not their authority being narrowly confined to structural upgrade of the facilities.

That concludes my statement with regard to the dam safety portion this morning, sir, and I would be happy to answer questions regarding that or to continue on to discuss the reclamation hydropower expansion bill.

Senate NICKLES. If you would, please proceed.

Mr. **Osann**. S. 268 is similar in most important respects to S. 306. To a certain extent it appears to us to be a bill that has been overtaken by events.

Several of the projects that are identified in the bill have already been licensed for construction by the Federal Energy Regulatory Commission.

Several areas, the principal areas of concern that we would have, Mr. Chairman, are that the Secretary is given discretionary authority to make very substantial, really unlimited postauthorization changes in the project authorized for construction. Projects would be authorized for construction in advance of the preparation of a final environmental impact statement, and we would recommend that any project authorized by this bill be limited to those for which final environmental impact statements have been prepared.

We note that the Department of Energy is given very broad authority to construct new transmission lines. We note that new capacity is to be financially integrated with existing reclamation projects even though the Department of Interior audits of several basin accounts presently show egregious failure to recover the present Federal investment.

The earlier discussion on Belle Fourche project I believe illustrates the swamp that is out there with respect to the repayment policies with regard to the Pick-Sloan program, and perhaps some of the other basins as well that the Inspector General's Office has looked at. We would recommend that no additional repayment obligations be layered unto the Pick-Sloan account until the committee has had an opportunity to hold some oversight into Pick-Sloan repayment procedures and the payment procedures of other basins that have been found by the Office of the Inspector General to be substantially out of whack.

That is a summary of our concerns, Mr. Chairman, and I will forego a repetition of the balance of our statement in order to have whatever time you would like for questions.

[The prepared statement of Mr. Osann follows:]

NATIONAL WILDLIFE FEDERATION
1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

STATEMENT OF EDWARD R. OSANN
DIRECTOR, WATER RESOURCES PROGRAM
NATIONAL WILDLIFE FEDERATION
BEFORE THE
SUBCOMMITTEE ON WATER & POWER
COMMITTEE ON ENERGY & NATURAL RESOURCES
UNITED STATES SENATE
MARCH 24, 1983

My name is Edward Osann. I am the Director of the National Wildlife Federation's Water Resources Program. The Federation, with over 4.2 million members and supporters nationwide, is America's largest conservation organization. During the past decade, our membership has adopted more than 50 resolutions establishing Federation policy on various aspects of water resource conservation and development. The Federation and its affiliates have a history of working with state officials and the Federal construction agencies to resolve differences over water projects or policies. We have commented on scores of water projects; we have litigated numerous times as well, in those instances where earlier efforts to resolve differences have failed. We have committed substantial time and effort to the initial development--and now the defense--of the Water Resources Council's procedures for the planning and evaluation of Federal water projects. We have strongly supported legislative efforts, on both appropriations and authorizations, to redirect the Federal water resources development program.

Mr. Chairman, I appreciate the opportunity to present testimony to the subcomittee this morning. My comments today will be directed to the proposed Reclamation Safety of Dams Act amendments, S. 672 and S. 739; and Reclamation hydropower expansion, S. 268. Any additional comments on the Belle Fourche rehabilitation bill, S. 448, will be provided for the record of today's hearings.

Reclamation Dam Safety

We are pleased that the subcommittee has scheduled an early hearing for proposed amendments to the Reclamation Safety of Dams Act of 1978. We strongly support the timely initiation of dam safety improvements at Bureau of Reclamation facilities, and we regret that such legislation was not enacted into law by the 97th Congress.

The Department of the Interior is seeking important and needed authority to undertake additional remedial construction or other corrective measures at existing Reclamation dams for the purpose of dam safety. Under the Administration's proposal, the costs of such improvements or corrective measures are generally to be apportioned among the beneficiaries of each project in the same proportion as the beneficiaries' repayment of the original dam construction costs. It should be noted in this regard that existing repayment arrangements already provide substantial subsidies to beneficiaries, particularly agricultural irrigators.

During the last Congress, this committee failed to include the repayment provisions sought by the Administration when reporting the dam safety bill. This action would have rendered virtually the entire $550 million authorization a nonreimbursable expense to be borne by U.S. taxpayers at large. The two bills now before the subcommittee would also leave the tab for dam safety with Uncle Sam. Failure to require reimbursement for dam safety costs will only exacerbate the present level of underpricing of water and power from Reclamation projects. As conservationists, we are concerned that such underpriced resources tend to be wasted, rather than used wisely.

Mr. Chairman, much of the argument against requiring the reimbursement of dam safety costs stems from confusion over whether to consider dam safety a "cost" or a "benefit." Dams are built to provide benefits such as water supply, electric power, flood control, and recreation. Dams are not built for the purpose of providing dam safety. Clearly, dam safety is a cost. The cost of building a safe structure must be paid by someone, and it should make no difference whether these costs are incurred at the time of initial construction or at some later date. Dam safety is not a separable project benefit. The safety and stability of the structure is a prerequisite for the realization of project benefits--water power, etc.--over the life of the project.

Certainly, people downstream will benefit from a safe dam upstream. But the same can be said for people exposed to any other environmental risk, such as air or water pollution. However, the general practice in our society is not to treat pollution control costs as general taxpayer responsibilities, but rather to internalize these costs to the costs of building and operating the facilities, thereby internalizing pollution control costs within the costs of goods and services produced at such sites. This is the way our free market economy works best, and departures from such cost accounting for dam safety can only result in the further misallocation of our water and power resources.

We urge the committee to keep in mind the following points:

-- Reimbursement for Reclamation dam safety improvements has been sought by both the Carter and the Reagan Administrations;

-- The Army Corps of Engineers seeks reimbursement for dam safety improvements at Corps dams in the same manner as the costs of the original dam;

-- Elsewhere in the Reclamation program, such as the Emergency Fund Act, expenditures for major repairs are either reimbursable or returnable (as noted in last year's committee report on S. 1628); and

-- Under the Administration's proposal, reimbursement would be spread over 50 years, and the repayment responsibilities of small farmers would be limited by their ability to pay.

With regard to the specifics of the various proposals before the subcommittee, we concur with the Administration position, with two exceptions on the subject of reimbursement. In general, we prefer to see dam safety costs repaid in accordance with existing reimbursement provisions in existing law. Changes in repayment requirements for the various benefit categories are legitimate topics for review. But such review should be addressed as part of general water policy legislation and not handled piecemeal on dam safety legislation.

Therefore, we recommend that costs allocated to irrigation that are in excess of the irrigators' ability to pay should not be nonreimbursable, but rather should be repaid in accordance with existing law. For multipurpose projects, this would mean that such costs would be allocated to the power account for repayment. Secondly, costs allocated to recreation and fish and wildlife purposes should be repaid in accordance with the Federal Water Project Recreation Act, as amended, which provides for repayment of 50% of the costs allocated to these purposes.

Finally, we note that S. 739 makes no reference to "replacement," that is, the construction of entirely new dams with dam safety funds. While we generally prefer the Administration language, which would allow a wide array of measures, both structural and not structural, for resolving safety problems, we would prefer the silence of S. 739 to the open-ended "replacement" authority of S. 672.

Thank you for this opportunity to testify. I would be happy to answer questions on this portion of my testimony.

NWF 3/24/83

Reclamation Hydropower Expansion

S. 268 is similar in most important respects to S. 306, which was passed by the Senate in the last Congress, but saw no action in the House. The bill now before the committee poses several major policy issues which we urge you to consider before taking action on the bill:

- the Secretary of the Interior is given discretionary authority to make unlimited post-authorization changes;
- private development at several of the sites designated in the bill could be preempted, although non-federal interests are currently pursuing permits or licenses at eight out of the eleven sites named in the bill;
- DOE is given broad authority to construct new transmission lines;
- new capacity is financially integrated with existing Reclamation projects, even though DOI audits of several basin accounts presently show egregious mismanagement and a failure to recover the present Federal investment.

Post-Authorization Change Authority

S. 268 would authorize specific sites, and specific kilowatt capacities for expansion, but would also given unbounded authority (Section 1, page 2) to the Secretary of Interior to make post-authorization changes without even giving notice to Congress. If these projects are allowed to go forward with this loose authority to make post-authorization changes, the outyear spending will most certainly increase.

Federal Preemption

In Sec.1, the bill provides that construction by the Secretary of the Interior of power facilities at Friant, Whiskeytown, Red Bluff, Stoney Gorge, and Monticello shall not proceed if a license has been issued by the Federal Energy Regulatory Commission to a non-federal entity prior to October 1, 1985. Licenses have been issued by FERC for four of these sites already. Furthermore, if the purpose of this provision is to allow non-Federal developers the right to develop these sites if it can be done within a reasonable period of time, then every project except Palisades, Anderson Ranch and Minidoka should be included in the proviso. The current status of license and permit applications before the Federal Energy Regulatory Commission is as follows (as of 3/83):

Friant	licensed (Friant Power Authority)
Whiskeytown	licensed (Redding, CA)

Yellowtail	competing permit applications pending (Mitex Inc.; Mitchell Energy Co.; City of Gillette)
Red Bluff	preliminary permit issued (Redding, CA)
Stoney Gorge	licensed (Santa Clara, CA)
Monticello	licensed (Solano Irrigation District)
Palisades	preliminary permit denied (Idaho Water Resources Board)
Anderson Ranch	none
Minidoka	none
Boca	preliminary permit issued (Truckee-Donner Irrigation District)
Prosser	preliminary permit issued (Truckee-Donner Irrigation District)

At a time when the Federal government is pulling back its financial obligations in favor of non-federal and private development, it seems incongruous to preempt willing non-federal interests from developing sites for which they have already invested time and money.

New Transmission Authority

Section 2 of the bill authorizes the Secretary of Energy to construct transmission lines to physically connect the new hydropower facilities to the Federal system, and as the Secretary determines necessary to accomplish distribution and marketing of the additional power. In our opinion, such language provides open-ended authority for the Secretary of Energy to construct new transmission lines anywhere, including areas far removed from the project site, on the strength of the Secretary's desire to market additional increments of Federal hydropower. Such expanded authority would more appropriately be considered upon a comprehensive Congressional reappraisal of the Federal hydropower program.

Repayment and Pricing

In light of the serious financial mismanagement disclosed in several audits of the Department of Interior Inspector General for various basin accounts within the Reclamation program, it is entirely inappropriate to financially integrate the new repayment obligations represented by the projects in S. 268 with existing federal power accounts. The involvement of the Federal government in water resources projects has made a relatively cheap energy source--hydroelectric power--even cheaper, by means of artificially low discount and interest rates and numerous non-reimbursable features in multipurpose projects. The mismanagement of repayment procedures has made this cheap energy cheaper still. Our principal concern is that such underpricing of electric power has encouraged consumption, rather than conservation. By melding these new projects into existing power pools for marketing purposes, the resulting average price will give customers misleading pricing signals, contrary to the Administration's preference for unsubsidized and unregulated energy pricing. New federal hydroelectric power should be marketed separately from the existing basin accounts and rates charged should more accurately reflect the full cost to the Federal government of generating the added increments of electric power. Any legislation should clearly state that interest rates for determining interest costs during construction and interest charges on the repayment of capital costs shall be set at the rate of average yields for long term Federal obligations, rather than the coupon interest rate referenced in Sec. 7 of S. 268. The projects contained in this bill do not warrant an interest rate subsidy from the Federal taxpayer.

SUMMARY

Congressional authorization of water project construction where economic feasibility is marginal at best, or where responsible non-federal interests are actively pursuing site development, is simply not in the national interest, especially given the need to reduce Federal expenditures. The broad discretionary authority given to the Secretary of the Interior and the Secretary of Energy for post-authorization changes and transmission line placement removes this Subcommittee from its proper role of oversight and budgetary control. The marketing arrangements in S. 268 will place an additional obligation on power accounts which are already in the red.

All of these issues point to the need for major revisions to S. 268. NWF opposes enactment of the bill in its present form.

DAEN-CWO
DAEN-CWE

DEPARTMENT OF THE ARMY
Office of the Chief of Engineers
Washington, D. C. 20314

ER 1130-2-417

Regulation
No. 1130-2-417

30 November 1980

Project Operation
MAJOR REHABILITATION PROGRAM AND DAM SAFETY ASSURANCE PROGRAM

1. Purpose. This regulation provides guidance and procedures for investigation and justification of requirements for major rehabilitation or modifications for dam safety at completed Corps of Engineers projects and to determine whether such rehabilitation or modification work should be accomplished under the Major Rehabilitation or Dam Safety Assurance Programs with Construction, General funds, or for applicable projects, with construction funds under the Flood Control, Mississippi River and Tributaries appropriation title.

2. Applicability. This regulation is applicable to all OCE elements and field operating activities having Civil Works responsibilities.

3. References.

a. DAR 13-201

b. ER 11-2-240

c. ER 1110-2-1150

d. ER 1110-2-1200

e. ER 1110-2-2901

f. EM 1110-2-1301

g. EM 1110-2-1451

h. Hydrometeorological Report 51. Available from U.S. Government Printing Office, Washington, D.C. 20402. (Stock No. 003-017-00424-4).

4. Policy.

a. The purpose of the Major Rehabilitation Program is to permit construction of infrequent, costly structural rehabilitation or major replacement works that are intended to extend the useful life of a project or a principal feature thereof at projects operated and maintained by the Corps of Engineers. Projects approved for Major

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This regulation supersedes ER 1130-2-417 dated 8 April 1977.

Rehabilitation will require budget justification and other supporting data similar to the budget information prepared for construction projects. The Major Rehabilitation Program is limited to the major repair or restoration of main structures such as dams, locks, powerhouses, and breakwaters, exclusive of electrical, mechanical, and other equipment, except that such equipment may be included where it is essential to and integral with the feature of the project being rehabilitated. As a further exception, the Major Rehabilitation Program may include the periodic replacement of large individual items of major equipment such as turbines and generators when they are part of a major replacement program. Division Engineers should exercise careful judgment to assure that recurrent work items of routine nature are not recommended under this program. District Engineers should make every effort to provide for regular maintenance of completed projects through normal Operation and Maintenance, General budget processes. Major repairs to or replacement of boats, trucks, mobile cranes, and similar mobile equipment are excluded from this program. In case of emergency rehabilitation, where delays would jeopardize the safety of the project, reprogramming of existing Operation and Maintenance, General funds will be considered. This procedure will reduce administrative burdens and delays otherwise involved in the development of adequate information and data in support of fund requests, and in adhering to the regular budget justification and appropriation process for funding of Major Rehabilitation projects under Construction, General.

b. The Dam Safety Assurance Program provides for modification of completed Corps of Engineers dam projects which are potential safety hazards in light of present day engineering standards and knowledge. The program is intended to facilitate upgrading of those project features which have design or construction deficiencies related to dam safety in order to permit the project to function effectively and as originally intended. In order to qualify, the modifications must be within the Chief of Engineers' discretionary authority to rectify and also must be such that they cannot be accomplished under the routine maintenance or major rehabilitation programs. Projects approved for Dam Safety Assurance will require budget justification and other supporting data similar to the budget information prepared for construction projects. Project modifications requiring additional authorization may be identified under this program. However, these modifications would not be eligible for accomplishment until the requisite Congressional authorization is obtained in accordance with NEPA and Principles and Standards. Generally, existing authorities are considered sufficient to permit improvements to the project for safety purposes if such improvements do not alter the scope or function of the project or substantially change any of its specifically authorized purposes.

Examples of project features eligible for upgrading under this program follow:

(1) Enlarging existing or constructing new facilities to provide adequate discharge capability.

(2) Raising dam height to provide adequate freeboard allowance.

(3) Increasing structural stability of the embankment and foundation or structure to withstand hydrologic and seismic loading or to correct existing structural deficiencies other than deterioration.

(4) Acquiring lands downstream from spillways for hydrologic safety purposes.

c. In addition, the Dam Safety Assurance Program is designed to upgrade dams built by the Corps of Engineers and turned over to local interests to operate and maintain. These upgrading projects may require additional authorization, but the studies will be funded under this program. The Major Rehabilitation Program is not applicable to local protection projects, dams or other works, turned over to local interests for operation, maintenance and major replacement.

d. Specific and joint use costs associated with the Major Rehabilitation Program or the Dam Safety Assurance Program will be allocated to the authorized project purposes in accordance with the current cost allocation. The Major Rehabilitation Program will be subject to the same specific and joint use percent as the allocation of operation and maintenance costs and the Dam Safety Assurance Program will be subject to the same specific and joint use percent as the allocation of construction expenditures. Where reimbursable purposes exist for the authorized project, the appropriate share of the allocated rehabilitation or dam safety assurance costs shall be recovered on this same percentage basis.

5. Definition. Major rehabilitation or modification for dam safety assurance may be included in the Major Rehabilitation Program or Dam Safety Assurance Program if all of the following conditions exist:

a. The structural work does not include additions or betterments which constitute a change in project purpose, size, capacity or location. Modernization of operating equipment (except for mobile equipment) to meet current design standards may be incidentally included.

b. The estimated cost of the work is $5,000,000 or more. For multi-project systems that are budgeted as a single project, the $5,000,000 applies separately to each component project.

c. The structural work is required for continued operation of the project for its authorized purposes.

d. The work meets applicable criteria, as specified for Major Rehabilitation or Dam Safety Assurance New Starts in the annual Budget EC, for the budget year in which it is to be initiated. Each of these programs is continuing, and projects thereunder will not compete for selection with regular Construction, New Starts.

e. The accomplishment of the work satisfies program requirements as demonstrated by a reconnaissance report.

6. Procedural Requirements. In order to identify and process work for inclusion in the Major Rehabilitation or Dam Safety Assurance Programs, the following reporting and design procedures will be followed:

a. Reconnaissance Report. The reporting officer is to conduct a reconnaissance and prepare a report for preliminary evaluation of those work items meeting the definitions of paragraph 5. Charges for the reconnaissance report not to exceed $15,000 may be made against the Operation and Maintenance, General, Condition and Operation Studies account for projects maintained by the Corps of Engineers and under the Inspection and Report account for projects constructed by the Corps of Engineers, but turned over to local interests to operate and maintain. Since it is intended to minimize study effort, all studies estimated to cost over $15,000 must be approved by DAEN-CWO-M prior to their initiation. The report will be prepared on the basis of pertinent information and data readily available. Detailed field investigations and office studies will be kept to a minimum. The report should be designed to develop a basis for decision on: (a) the need for and justification of the rehabilitation or modification for dam safety, (b) the appropriateness of funding under the Major Rehabilitation or Dam Safety Assurance Programs, (c) whether the work requires additional authorization, (d) whether the work is subject to cost sharing, (e) scope and cost of subsequent investigation and design requirements, and (f) level of design review required. The report is to be prepared in accordance with Appendix A. If the estimated cost of the recommended work is greater than $10 million, or is greater than 25 percent of the estimated replacement cost of the total project, the Reconnaissance Report is to be expanded to include a detailed economic analysis of the recommended work and other feasible alternatives.

b. Submittal and Review of the Reconnaissance Report.

(1) Ten copies of the report will be transmitted with recommendations of the Division Engineer to HQDA (DAEN-CWO-M) WASH DC 20314 (exempt under para 7-2b, AR 335-15).

(2) Once the Reconnaissance Report is transmitted, further work may be accomplished only upon approval from DAEN-CWO-M.

(3) Upon review of the Reconnaissance Report, OCE will approve or disapprove the recommended work under the Major Rehabilitation or Dam Safety Assurance Programs.

c. Design Memorandum. A single general design memorandum or a general design memorandum with subsequent feature design memoranda will be prepared on any project feature(s) to be rehabilitated or modified for dam safety, based on the plan approved in the Reconnaissance Report. The design memoranda shall be prepared in accordance with Appendix B. Based on information contained in the Reconnaissance Report, OCE will provide guidance on the level of review authority. As a general rule, authority for approval of a design memorandum for proposed work which does not entail significant changes in design or design standards over that used in design of the original structure will be delegated to the Division Engineer, in accordance with ER 1110-2-1150.

d. Submittal of the Design Memorandum if Approval by OCE is Required.

(1) Ten copies of the design memorandum will be transmitted with recommendation of the Division Engineer to HQDA (DAEN-CWE-BB) WASH DC 20314 (exempt under para 7-2b, AR 335-15).

(2) Once the design memorandum is submitted, further work may be accomplished only with approval of OCE.

e. Submittal of Design Memorandum if Approval Authority Has Been Delegated to the Division Engineer.

(1) Upon approval of the design memorandum by the Division Engineer, ten copies of the design memorandum with all transmittal correspondence, including the Division Engineer's approving indorsement, will be transmitted to HQDA (DAEN-CWE-BB) WASH DC 20314 (exempt under para 7-2aa AR 335-15). For exceptions see (3) below.

(2) If OCE wishes to comment on the design memorandum or the Division Engineer's indorsement, these comments will be furnished to the Division Engineer within 30 days of receipt of the Division Engineer's indorsement. Unless such a comment or an interim notification is received within 30 days, it can be assumed there will be no comment from OCE.

(3) If the Division Engineer finds that the design memorandum involves major changes from the plan approved in the Reconnaissance Report, it shall be transmitted to OCE for the 30-day OCE comment period prior to, rather than after, the Division Engineer's approval action.

f. Other Design Memorandum Transmittal or Distribution Requirements. The requirements of ER 1110-2-1150, paragraphs 20c and d, 21c and d, 22 and 23, and 24 are also applicable to the Major Rehabilitation or Dam Safety Assurance design memorandum transmittal, review and approval process.

7. Plans and Specifications. Plans and specification will be prepared, reviewed, approved and distributed in accordance with the requirements of ER 1110-2-1200.

8. Funding.

a. Design and Plans and Specifications. The reporting officer may, upon receipt of approval of a reconnaissance report, conduct design studies and prepare a design memorandum and plans and specifications using funds from the Operation and Maintenance, General appropriation, except that plans and specifications will not be initiated in cases where the design memorandum requires approval of the Chief of Engineers until such approval is received.

b. Construction Funds. Following receipt of OCE approval of the Reconnaissance Report, the reporting officer may budget for Construction funds under the Major Rehabilitation or Dam Safety Assurance Programs categories of Construction, General, following the format of continuing construction as required by ER 11-2-240. Construction on land acquisitions may not be started until the design memorandum has been approved and funds have been specifically appropriated and allotted for the required work.

FOR THE CHIEF OF ENGINEERS:

Forrest T. Gay

FORREST T. GAY, III
Colonel, Corps of Engineers
Executive Director, Engineer Staff

3 Appendixes
APP A - Format and Content of Reconnaissance Report
APP B - Format and Content of Design Memorandum
APP C - Guidance on Hydraulics and Hydrology

Senator **Nickles**. I appreciate that very much because we are in some time constraints. We have already exceeded actually the time that I was hoping we would be able to wrap the hearing up in, so I appreciate your comments and your statement. They will be entered, both of them, into the record in full, so in general you are supportive of the safety of dams bill with some modifications, with greater cost participation?

Mr. **Osann**. That is correct.

Senator **Nickles**. And then under the reclamation bill——

Mr. **Osann**. The hydropower bill?

Senator **Nickles**. Yes, the hydropower bill?

Mr. **Osann**. We are opposed to the bill in its present form. We recommend it be substantially pruned, as did the administration, and that the committee limit its inquiry at this point to those projects for which full environmental analysis is available.

Senator **Nickles**. Do you have any problem with the administration's desire to see more or greater participation in the private sector on these projects?

Mr. **Osann**. In general we don't. We did not have the benefit of the text of the administration's proposals prior to this morning's hearing. We would like to have an opportunity to look at that before providing specific comments on the specifics of their amendments, but in general with respect to both the Corps of Engineers and the Bureau of Reclamation, we support greater non-Federal participation both up front with regard to cost sharing and over the long run with regard to repayment, greater participation by non-Federal beneficiaries.

Senator **Nickles**. Senator McClure, do you have any questions?

The **Chairman**. Thank you, Mr. Chairman. I will be as brief as possible.

Mr. Osann, you have suggested that you don't object to the cost sharing and non-Federal participation.

Mr. **Osann**. In general terms, Mr. Chairman.

The **Chairman**. In the hydropower project, do you have an opinion as to how the power should be marketed or priced in marketing?

Mr. **Osann**. Our preference I think would be for fair market value pricing of new hydroelectric power. We recognize that we were miles away from that, with the economists on that particular point. We would observe that the case against fair market value pricing and in favor of limiting the Federal Government revenues to the recovery of costs would be stronger if there were a stronger track record of cost recovery, and in our view, in the view of others who have looked at some of these accounts, the cost recovery is less than adequate.

The **Chairman**. I don't mean to prolong that discussion, but it is difficult to know what fair market value is in a utility setting, is it not?

Mr. **Osann**. There is always the possibility of putting it up for bid.

The **Chairman**. Would you suggest that the Nation's utility systems be managed on that basis so that they can go out and charge what the market would bear without respect to the historically imbedded cost in the utility regulation?

Mr. OSANN. I am not aware of any State utility regulatory scheme that involves full margin of cost pricing, if that is the question you are asking.

The CHAIRMAN. Not really; utilities are ordinarily regulated, and the price structure is based upon their historic costs rather than the market value of the product which they sell. Is that not correct?

Mr. OSANN. I believe that is correct, yes.

The CHAIRMAN. And if you were to urge full market value pricing, we would change that system completely by disregarding the regulatory process.

Mr. OSANN. For new projects, Mr. Chairman.

The CHAIRMAN. Why would you differentiate between new and old?

Mr. OSANN. Because the pricing for new projects affects investment decisions. The pricing for existing projects for the most part does not affect investment decisions, and the judgment about investment in additional hydropower facilities vis-a-vis other kinds of investments.

The CHAIRMAN. You have stated in one place I understand in your statement that if something is priced at less than its market value, it stimulates overuse of that commodity. You are suggesting that water ought not to be underpriced or subsidized lest it be thus encouraged in wasteful use. I think that is a fair summary of your position, and I understand that.

Without pursuing the other question, the other analogy about the marketing of electric energy too far, if indeed the price is depressed, we stimulate overuse, and you have I suspect consistently followed the position that market choices ought to be allowed to function as freely as possible so that the people will not be induced to use more of a given commodity than current market conditions indicate.

If that is the motivation behind your statement—I don't mean to put words in your mouth, but if that is the motivation behind your statement, then it would seem to me you don't look at historic costs for utility-based pricing but you look at the current market value lest the price be depressed in the current market and therefore people stimulated to overuse. Is that not correct?

Mr. OSANN. I believe that is generally correct, but I think there are certain practicalities to take into consideration, and of course, it is the business of Congress to take into consideration all the practicalities.

The CHAIRMAN. We are trying to do that in the Dam Safety Act, too.

Mr. OSANN. I understand that, Mr. Chairman. I think that in our judgment the good first step would be to consider current investment in this manner, and we are not proposing a radical restructuring of all the water and power pricing, but at some point we would like to move away from the subsidies, wean the beneficiary groups away from the continued reliance on subsidy from the Federal Government for natural resource extraction and use.

The CHAIRMAN. Thank you very much, Mr. Chairman.

Senator NICKLES. Thank you, Senator, and thank you very much, Mr. Osann, for your comments before the committee, and we look forward to—I don't know. Did the Senator have any additional questions?

The CHAIRMAN. No.

Senator NICKLES. It may be we would have additional questions for you, Mr. Osann, so thank you very much.

Our last and final witness would be Pat O'Meara, executive vice president of the National Water Resources Association. Mr. O'Meara, thanks for your diligence in staying with us. I wasn't really expecting this hearing to go quite so long, but we appreciate your cooperation and patience.

STATEMENT OF J. W. "PAT" O'MEARA, EXECUTIVE VICE PRESIDENT, NATIONAL WATER RESOURCES ASSOCIATION

Mr. O'MEARA. Thank you, Senator. It is a pleasure for me to have this opportunity this morning. I have a statement that I would ask be submitted for the record, and I would endeavor to summarize it in less time than it would take to read it in full.

Senator NICKLES. Thank you so much.

Mr. O'MEARA. I want to first of all congratulate you, Senator, on your appointment as chairman of this subcommittee. I would observe that we have a very fine working relationship with your predecessor, Senator Murkowski, and we look forward to working with you on productive legislation such as the bills that are before this committee this morning.

We are here to comment on all four of the bills that are under consideration, and first of all, I would move to the two bills, S. 672 and S. 739, on reclamation safety of dams.

In order that it would become part of the record of this hearing, as a part of my statement you will note I have included the remarks of Senator McClure, the chairman of the full committee, when he introduced this legislation before the Senate. I think it is eloquent justificiation of the need and the background of this bill.

The administration has come forward this morning with five amendments, and we generally agree with all but one of those amendments, and we note that the Commissioner also supports the figure of an additional $550 million. The National Water Resource Association does not stonewall cost-sharing concepts for the construction of new projects. We are in a dialog with the Secretary of Interior trying to reach an agreement on what a fair and reasonable cost sharing would be, but we part company with the administration when we come to the consideration of safety under cost sharing restrictions.

What is under consideration today are dams that were sited by the Feds, that were designed by the Feds. They were built by the Feds. They have been maintained by the Feds, and now at this point in time new criteria has been developed by the Feds, and all of these dams we are talking about are under repayment contracts. They are not under repayment schedule. They are not under repayment agreement. They are under legal, binding contracts, and now we are coming up with a cost sharing that changes the ground rules.

Well, what the Feds have told us now is that because of the advanced technology and specifically because there is better seismic and hydrologic data, many of the dams have been deemed unsafe, a hazard to life and property. Now seismic and hydrologic data, and let me read you from the dam safety law if I may—this is section 4(b), "Costs heretofore or hereafter incurred in the modification of structures under this act, the causes of which result from new hydrologic or seismic data or changes in the state-of-the-art criteria, deemed necessary for safety purposes, shall be nonreimbursable and nonreturnable under the Federal Reclamation Law."

That is the law, and I think we should stay with that law. It is very clear, but rather than urge a quick enactment of this bill, to my disappointment, the administration has recommended cost sharing.

Mr. Chairman, in my opinion, the safety of American lives is not a negotiable issue. Further, the law has made it clear where the Congress stands on this issue. We have been hearing about cost sharing for 2 years and we still have no definition, and the administration this morning offered no definition of what percentage of cost sharing would be, so if you enact the law, then I would assume we would have to go into a long period of negotiations on trying to identify who the beneficiaries are and what share of the cost they are going to have to bear and go through long and almost unending negotiations to determine what kind of contract, and meanwhile the doomsday clock is ticking.

I worked at Interior for many years, Mr. Chairman, and I can tell you at least 10 years ago that there was a concern in the Department of Interior about Lake Jackson Dam, and studies were underway to see what we could do about that dam. At a hearing earlier this week the Commissioner told the House Subcommittee on Water and Power Resources that he felt there was a failure probability of Lake Jackson Dam of about 30 percent over the next 100 years. As far as I am concerned, 10 of those 100 years have gone, so now we are talking about a failure probability of 33 percent over the next 90 years. Those odds are beginning to get very slim, particularly if you think about lives and property we are talking about, and I agree with the Commissioner this morning on one thing he said. He said it is nervous, and I think we could describe it in more vigorous terms than that.

I have a little difficulty, and I hope maybe you would share with me—we have an irascible dictator in Libya and 1½ or 2 years ago by some of his government orders the lives of Americans were in jeopardy in Libya, and there was no hestitation to have an airlift to get the Americans out of Libya. Nobody said they are going to have to share the cost. Nobody went through a long dissertation. The worry was American lives, but for some reason or other when they were on foreign property it seemed to have more concern and more direct action than people who are living on U.S. soil, and the danger probably is greater here with some of these dams than the danger was in Libya.

I would like to have you consider that people that we are working for are in danger and in no less danger maybe than some of the people in trouble spots around the world. This Government does not hesitate on the basis of safety of American lives to move forthwith and quickly and not go through some silly dissertation about who is going to have to draw up the contract on repayment of that.

I notice that Senator McClure picked up far better than I did when the Commissioner called for safety features at Hoover Dam to protect the visitors who were there, and he didn't hesitate to say that those would be paid for directly. Now we are talking about safety again and that was the justification for it and the justification for this bill is safety, and I don't think—I shouldn't take the time to tell you. I once knew a fellow who fell asleep smoking in bed, but he was lucky. He was really very lucky. It was in a water bed and he drowned.

We just don't seem to focus in on this because it is an American thing. We just take our time and relax and go ahead on this, so I am glad that the chairman of the full committee was here because that brings us into focus on Teton Dam where we had, what, 11 deaths, and disrupted the lives of thousands. I don't need to go into that, but that one disaster has totaled more cost to the Federal Government, direct cost, than the entire bill that we are talking about now, and if we would have a failure at Roosevelt or one of the dams on the Salt River, we are not talking about millions. We are talking about billions, and I can't believe there should be hesitation in moving this bill forward to make sure that avoidable catastrophies are avoided.

I would like to share with you something I received from the field just 1 week ago that I thought was certainly typical for this bill. This comes from Ed Glassgow who is the manager-treasurer of the Black Hills Conservancy, subdistrict of Rapid City, S. Dak.

He says,

> Pat: I have just returned from a meeting with the Bureau of Reclamation regarding appending the $10 million modification of Patcola Reservoir. The message was simply this. The project will not be completed without some form of cost sharing.

He says the impetus for the modification of the dam safety program mandated by—the impetus for the modification is the dam safety program mandated by the Congress, and it is our understanding that this project is the first of this type to hit OMB which is mandating the cost sharing.

> Here are some of our frustrations. There apparently are no guidelines for the amount of cost sharing. The pressure to make modifications is coming from the Congress, not the local people. The criteria for storms and modifications which it contains seem extreme. We first completed all sorts of flood control measures as a result of our 1972 floods, and now we are told more is necessary. The Bureau just finished modifications of the Deer Field Reservoir upstream which will provide additional protection. If the dam was under design by the Feds, it appears they have a responsibility for the modification.

Well, I know it's late and so I only want to continue very rapidly, then, to commend Senator McClure for introducing S. 268. Certainly the projects that could be built are going to give us clean hydropower. They are going to contribute to the energy needs of this Nation. The 11 existing projects that are in your bill, as I calculate it, Senator, would produce energy the equivalent of 2½ million barrels of oil per year, and I certainly am one that would be glad to give OPEC that kind of a kick in the pants.

Now finally, S. 448, Senator Abdnor's and Pressler's bill for Belle Fourche, you have had a great deal of testimony this morning. The Commissioner has said they are under fiscal constraints but I would remind this committee they are not under the fiscal constraints that the people of Belle Fourche are under. I would think from what we heard this morning about South Dakota, it is time for some equity, and the two Senators who were here this morning tell you they are supporting that bill, and the South Dakota block in the House of Representatives also supports it.

The **Chairman**. That's a big block.

Mr. **O'Meara**. There are several States that have that kind of a block. I hate to refer to them any differently. And finally I would say that it seems to me that some of the dam criteria that we now have in the safety of dams program was probably designed by Noah, and I am not talking about the Federal NOAA. I am talking about the Biblical Noah.

Thank you very much, Senator.

[The prepared statement of Mr. O'Meara follows:]

STATEMENT OF

J. W. "Pat" O'Meara
Executive Vice President
National Water Resources Association
before the
Subcommittee on Water and Power
of the
Committee on Energy and Natural Resources
United States Senate
Washington, D.C.

March 24, 1983

Mr. Chairman and Members of the Subcommittee:

It is my pleasure to appear before the Subcommittee today on behalf of the National Water Resources Association and to congratulate Senator Nichols on his appointment as Chairman of this Subcommittee. We enjoyed the opportunity to work with your predecessor, Senator Murkowski, over the past 2 years, and we look forward to working with you, Mr. Chairman, on legislation of interest to the Western water community. As you well know, since you represent one of the States of the NWRA area, our Association is a confederation of the State water user associations in the 17 Reclamation States and Hawaii. This past year, 1982, we celebrated our Golden Jubilee during our National Convention in Salt Lake City. This year, I think the Chairman will be pleased to know, our convention will be held in Tulsa, Oklahoma, in October. We are very hopeful that the Chairman will be able to participate in that meeting.

Turning to the business at hand, I appear today in support of the four bills under consideration by the Subcommittee. While these bills differ widely in content, they share the common denominator of developing the resources of the West. Two of the bills address unforeseen contingencies that have arisen since the original legislation was enacted and the projects constructed. I want to commend the Chairman for his early attention to these important measures.

First, I would like to comment on S. 672 and S. 739, identical bills to provide a desperately needed increase in the authorization of the Reclamation Safety of Dams Act of 1978 of $100,000,000, not to exceed $550,000,000.

Mr. Chairman, as a part of my support of these safety of dams measures, I would like to cite in its entirety, the statement of the Chairman of the full committee, Sen. McClure, when he introduced S. 672. The eloquent justification of the Chairman needs no elaboration:

> The legislation I am introducing today for myself, Mr. Goldwater, and Mr. Wallop, authorizes additional funding for the Bureau of Reclamation safety of dams program and is identical to the last Congress S. 956, as reported on August 19, 1982, by the Committee on Energy and Natural Resources.
>
> My colleagues will recall that a companion measure, H.R. 3208, passed the House on April 29, 1982. Unfortunately, the Senate did not consider either measure prior to adjournment of the 97th Congress.
>
> I believe that it would be helpful to my colleagues and the public to include in the Record at this point an excerpt from the committee report (S. Rept. 97-533) that accompanied S. 956 when it was reported by the committee. This should help place the legislation in perspective in relation to the current safety of dams program at the Bureau of Reclamation and will furnish additional information to the Senate.
>
> ## BACKGROUND AND NEED
>
> The Act of November 2, 1978 (Public Law 95-578) authorized the appropriation of $100 million to the Secretary of the Interior for purposes of a safety of dams program for the Bureau of Reclamation and established the parameters under which the Secretary was authorized to construct, operate, and maintain new or modified features at existing Federal reclamation dams for safety of dams purposes. Recent events of the time (the Rapid City, South Dakota flood and the failure of the Bureau's Teton Dam in Idaho) had focused concern upon the hazards presented by floods and the failure of dams or related structures.

Traditionally, the Bureau of Reclamation had maintained a formal program of inspection under its Examination of Existing Structures Program of the facilities related to the 333 reservoir impoundments under the Bureau's jurisdiction. Major modifications of dams for safety purposes had been authorized by Congress on a case-by-case basis; each project considered in a separate authorizing bill. The 1978 Safety of Dams Act provided the Secretary with permanent authority to undertake safety of dams modifications rather than having to come to the Congress for each project. However, the Act was specific that the funds were to be used only for safety purposes and not for providing additional water storage capacity or the development of benefits above those provided by the original structures. Costs of the program which resulted from age and normal deterioration of structures or from nonperformance of reasonable and normal maintenance were to be treated as project costs and reimbursable by project participants in accordance with existing law.

Since initiation of the program, estimated costs of dam safety activities have increased as a result of inflation and also the discovery of additional safety problems which need to be addressed. During the hearings on S. 956, the Administration testified that in addition to the thirteen dams identified at the outset of the program in 1978, an additional thirty-five dams have been identified as needing safety related work. The current authorization of $100 million is inadequate to fund the additional work which is estimated to cost in excess of $500 million. An increase in the authorization for the program of an additional $440 million will permit dam safety activities at the newly identified projects as well as allow for the increase in costs due to inflation.

Mr. President, the major thrust of this measure is to increase the amount authorized to be appropriated for implementing the Reclamation Safety of Dams Act of 1978. This act has proven to be a most workable and viable means of correcting unsafe conditions at many of the older structures built by the Department of the Interior's Bureau of Reclamation. The program is directed to those structures at which the Secretary has determined--and subsequently reported to the Congress--first, that an unsafe condition exists, and second, that this condition could not have been foreseen, at the time the dam was designed. Generally, these conditions derive from two causes, the first of which is hydrologic and the second seismic in nature.

The problem most frequently occurring is one that arises from inadequate spillway capacity. This in turn stems from an underestimation on the part of the designers of the magnitude of flood runoff which might be expected. Longer study of, and greater experience with, flood flow forecasting now show that many of the older spillways are incapable of handling flood crests. Without adequate spillway capacity, the entire structure is threatened with catastrophic failure, resulting not only in potential loss of life and property downstream, but in the loss of a very valuable piece of Federal property--the dam itself. The effect of this legislation, Mr. President, would be to authorize flood protection for Federal property, and to avoid the failure of a Federal dam with its ensuing liability for damages.

In like manner, advances in the study of seismic factors sometimes disclose that a particular structure is in danger from earthquakes. Where these conditions are found to exist, the Federal Reclamation Safety of Dams Act provides that the Secretary of the Interior may proceed with dispatch to propose corrective measures at Federal expense. The original sum authorized to be appropriated for this program has been substantially exhausted, yet there remains a sizable backlog of repair work to be undertaken.

Mr. President, the philosophical basis underlying the existing law is that the United States, having designed and constructed a dam which it now finds poses a major threat to the lives and property of its citizens, shall proceed with the utmost expediency to eliminate the dangers which threaten its citizens and property, and that the United States shall accomplish these corrective works at public expense.

Responsibility for the safe condition of its property goes hand-in-hand with ownership of that property. Any attempt to avoid that responsibility and change the law is an affront to fair play, commonsense, and the basic precepts of English common law, which provide that property owners must assume responsibility for the operation and conduct of their property.

Mr. President, the 1978 Safety of Dams Act was premised on the acknowledgement of the culpability of the Federal Government for inadequacies of design and any resulting damages due to failure of the structure. The act had four basic objectives: To protect the lives and property of our citizens by preventing dam failures; to protect the investment of the Federal Government in the dams and related structures; to prevent dam failure and the ensuing liability of the Federal Government for damages; and to assure the ability of the projects to continue to perform, to meet contractual relationships, and to provide revenues to the Treasury.

We need only look at the failure of Teton Dam in my home State of Idaho to grasp the importance of these goals. As many of my distinguished colleagues will recall, Teton Dam was completed by the Bureau of Reclamation in November of 1975. On June 5, 1976, it failed, causing 11 deaths, disrupting the lives of thousands, and costing the Federal Government over $350 million in damage claims. As a result, the Federal Government is now denied the revenues from a 20-megawatt powerplant, as well as the revenues and the social and economic benefits accruing from irrigation of 150,000 acres. We are also $79 million out of pocket for the construction of Teton Dam and powerhouse.

Mr. Chairman, the Administration has recommended five amendments to S. 672 and S. 739. We can accept all of those amendments, save one, and that, of course, is the proposed amendment that cost sharing be a part of this legislation.

We are talking about the safety of American lives and property, and that, Mr. Chairman, is not a negotiable subject. A benefit/cost ratio on the value of life or death has not yet been established, nor should it ever be necessary.

Attached to my statement, Mr. Chairman is a resolution adopted by our association which clearly indicates NWRA supports sound Federal policies on cost sharing by State and local entities for the reimbursable portion of water resource projects, but we do not believe the Administration has presented adequate justification nor that the Congress should reverse the precedent it has established and now decide to require reimbursement for safety measures that the Federal agency now deems necessary.

Requiring cost sharing of dam safety modifications could very well have the undesirable adverse impact of delaying, perhaps indefinitely, the implementation of this vital program. Dickering back and forth on how the costs of this program are to be allocated could well carry us beyond the time when an avoidable catastrophe may occur which would cost us far more than the costs proposed in this legislation. As expensive as this authorization may seem, it well could be far less expensive than attempting to decide who the beneficiaries may be and how much each should be charged.

Most of the dams that have been designated to be in need of repair are quite old. Some in the range of 70-80 years. Since they have been built, the technology of dam design and construction has advanced at a rewarding pace. The dams authorized, designed, and erected today would incorporate advanced information on hydrologic and seismic considerations relating to siting and design. Problems of hydrologic and seismic considerations based on today's technology are those now being cited as the basis of dam safety remedial measures.

Mr. Chairman, permit me to cite Section 4(b) of Public Law 95-578 enacted by the Congress on November 2, 1978, which states: "(b) Costs heretofore or hereafter incurred in the modification of structures under this Act, the cause of which results from new hydrologic or seismic data or changes in state-of-the-art criteria deemed necessary for safety purposes shall be nonreimbursable and nonreturnable under the Federal Reclamation law."

I would observe, Mr. Chairman, that from just one disaster, the damages caused by the failure of the Teton Dam in Idaho cost virtually as much as the entire authorization increase requested in this legislation, and this legislation is designed to authorize the rehabilitation of 48 structures.

Mr. Chairman, I think we have reached the point of no return. In other words, it is decision time. I was employed at the Department of the Interior from 1957 until 1976. Long before I left the Department 7 years ago, studies were underway to correct design deficiencies at Jackson Lake Dam on the Snake River in Wyoming that posed severe safety problems. Those studies seem no closer to an action program today than they were a decade ago, but the doomsday clock continues to click. At a hearing earlier this week, the Commissioner told the Subcommittee on Water and Power Resources of the House Committee on Interior and Insular Affairs that the Jackson Lake Dam had a failure probability of 30 percent in the next 100 years. As far as I'm concerned, 10 of those 100 years have passed, so the probability is now 33 percent in the next 90 years! I think those odds are worse than playing against a stacked deck.

I urge you and members of the Senate to give early favorable attention to this critical legislation.

Mr. Chairman, I would like to include in the record, as a part of my statement in support of the Safety of Dams legislation, a letter dated March 11, 1983, from Ed Glassgow, Manager-Treasurer, Black Hills Conservancy Sub-District. This letter clearly points out the problems and frustrations the local entities face with the proposed policy of cost sharing on dam safety.

We wish to commend the Chairman of the full committee, Sen. McClure, for introducing S. 268, a bill to authorize the Secretary of the Interior to construct operate and maintain hydroelectric power plants at 11 existing Reclamation projects. The hydroelectric generating units authorized by this bill would provide over 200,000 kilowatts of pollution-free power at a total investment of less than $250 million. Mr. Chairman; 200,000 kilowatts of energy is the equivalent of 2.5M barrels/yr of oil--in all likelihood OPEC oil. I should also like to point out that an investment of $250 million for 200,000 kilowatts of power represents a cost of $250 per installed kilowatt. Even though these are relatively small generating installations, the cost per installed kilowatt is competitive with larger sized oil or coal fired generators.

It is not least because it is last, but we also want to take this opportunity to urge the Subcommittee to approve S. 448 by Sens. Abdnor and Pressler to authorize the rehabilitation of the Belle Fourche irrigation project in South Dakota.

At hearings conducted by this Subcommittee last year, a strong record of justification for proceeding with the Belle Fourche Project was established. The rehabilitation of this project is long overdue and I urge favorable action by the Subcommittee on S. 448.

Finally, we note with considerable pleasure, that the Reagan Administration has sharply reduced the inflation rate that has continually escalated water project costs over the past several decades. We hope that favorable development will continue because very clearly it will help restore the fiscal integrity of water projects and shore up the financial well being of the Nation.

Attachments

RESOLUTION 81-8
FEDERAL RECLAMATION--DAM SAFETY PROGRAM

To encourage and support the full and timely implementation of the Federal Reclamation Dam Safety Act (Public Law 95-578) and the appropriation of such federal funding as may be necessary for these programs.

POSITION STATEMENT SUPPORTIVE OF
RESOLUTION 81-8
FEDERAL RECLAMATION DAM SAFETY PROGRAM

The United States Bureau of Reclamation has designed, constructed, maintained, and operated more than 240 reservoirs impounded by some 310 dams and dikes, and has transferred the responsibility for operation and maintenance of 110 such reservoirs and facilities to respective water user organizations.

The United States Bureau of Reclamation has developed and vigorously implemented a Review of Maintenance Program to insure the the proper operation and maintenance of the facilities. In 1965, an additional program was initiated to evaluate original dam designs, including modern criteria for flood analysis and seismicity, which resulted in the identification of 27 dams requiring structural modification to safely withstand the inflow design flood and/or the maximum credible earthquake.

The Ninety-fifth Congress, in recognition of the need to complete required structural modifications on the remaining dams and those subsequently so identified, enacted the Federal Reclamation Dam Safety Act (Public Law 95-578) which, among other things: (1) authorizes $100 million for the construction, restoration, operation, and maintenance of new or modified features at existing Federal Reclamation Dams for safety of dams purposes; and (2) directs the Secretary of Interior to report to Congress the scope and nature of corrective actions required, alternative solutions to structural modifications, and environmental impacts, if any, resulting from the implementation of the recommended plan of modification.

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BLACK HILLS
CONSERVANCY SUB-DISTRICT
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Ed Glassgow
Manager-Treasurer

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Sturgis, South Dakota

BERNITA LOUCKS
Rapid City, South Dakota

KIRK CORDES
Creighton, South Dakota

March 11, 1983

Pat O'Meara
National Water Resources Assn.
955 L'Enfant Plaza No. Bldg, SW
Washington, DC 20024

Dear Pat:

I just returned from a meeting with the Bureau of Reclamation regarding a pending $10,000,0000 modification of Pactola Reservoir. The message was simply this--the project will not be completed without some form of cost sharing.

As you are probably aware, the dam was built in the mid '50's with cost allocation as follows:

35.5% - City of Rapid City (water supply)
27.1% - Rapid Valley Conservancy District (irrigation)
30.2% - Flood Control
7.2% - Fish & Wildlife

The impetus for the modification is the Dam Safety Program mandated by Congress; and it is our understanding that this project is the first of this type to hit OMB which is mandating the cost sharing.

Here are some of our frustrations. There apparently are no guidelines for the amount of cost sharing. The pressure to make the modifications is coming from Congress, not the local people. The criteria for storms the modification would contain seems extreme. We first completed all sorts of flood control measure as a result of our 1972 flood and now we are told more is necessary. The Bureau is just finishing modifications to the Deerfield Reservoir--upstream--which will provide additional protection. If the dam was underdesigned by the Feds, it appears they have a responsibility for the modification.

Pat, I know you are looking for more work, but this appears to be an emerging problem that will concern every state. We would sure appreciate any comments and suggestions for a course of action.

Warmest Personal Greetings,

Ed Glasgow
Manager-Treasurer

cc: Judy Harrington, SD Water Congress
Black Hills Conservancy Subdistrict Board

P.S. Please give Barbie our regards. Also, you may be interested to know that I was elected to the South Dakota House of Representatives and am just completing my first term.

Senator Nickles. Thank you very much for your comments. Let me ask you just a question not exactly related, but it was mentioned by Mr. Neufeld when he stated that the Federal Government or the Bureau had made very stringent, and possibly too stringent, requirements as far as the requirements for dams.

Would you agree with that?

Mr. O'Meara. Absolutely; absolutely. We have come up with a design criteria that is so far above even the 500-year flood; it is a maximum probability flood that if we do get that kind of a rain, I don't think it is going to make any difference anyhow, and if we do have that kind of rain, I think it is like they say: You are going to have plenty of time for warning—build your ark.

Senator Nickles. God promised Noah there wouldn't be another rain like that.

Mr. O'Meara. I might observe I read, Senator, that at the time when it rained 40 days and 40 nights that western Oklahoma got a quarter of an inch.

Senator Nickles. I wouldn't be surprised. The water table is still falling.

Mr. O'Meara, thank you very much. Senator McClure, do you have any questions?

The Chairman. I have no questions. It is a pleasure to have you before the committee again, Mr. O'Meara.

Mr. O'Meara. Thank you, Senator.

Senator Nickles. It is, and we look forward to your visit to Oklahoma later this year.

Mr. O'Meara. We hope you will participate in that, Senator.

Senator Nickles. We look forward to that. Thank you very much. The committee will adjourn. We will keep the record open for 2 weeks for additional comments.

Thank you very much.

[Whereupon, at 12:50 p.m., the hearing was adjourned.]

APPENDIXES

Appendix I

Responses From the Department of the Interior to Additional Questions

United States Department of the Interior
BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

IN REPLY REFER TO: 724/730

MAY 16 1983

Honorable Don Nickles
Chairman, Subcommittee
on Water and Power
Committee on Energy and
Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Nickles:

In response to your letter of April 7, 1983, we are pleased to submit answers to questions from you, Senator Hecht and Senator McClure on proposed bills S. 268, S. 448 and S. 672. The question and answer statements are enclosed.

Also enclosed are answers to questions raised during the hearing (S. 268) held on March 24, 1983, and included in the hearing transcript.

Please let us know if you have further questions.

Sincerely yours,

Bob Broadbent

Robert N. Broadbent
Commissioner

Enclosures

Questions and Answers
Hearing on S. 268, S. 448 and S. 672

Senator Hecht

Question No. 1: It was recommended in the Administration's testimony on S. 268, that the Hoover Dam power users would be required to provide up-front financing for the uprating program. Is this a new concept in Federal water resource development? In turn, since the up-front financing would be a requirement prior to initiation of construction by the Secretary, might not this requirement jeopardize the uprating program, especially in light of the fact that the Hoover reallocation contract is in limbo?

Response: The acceptance of up-front financing or contributed funds is not a new concept. The procedure was authorized by Congress in 1922 by the Sundry Civil Expenses Appropriations Act. Although the authority has been used by Reclamation on a number of projects since authorization, it has not been used frequently and not as a generally policy.

We do not believe that the requirement for up-front funding for the Hoover Uprating Program will jeopardize this program. The additional powerplant construction and the normal operation and maintenance activities should be financed by the beneficiaries of the additional power. These beneficiaries will probably be the same entities that will contract for the existing Hoover capacity after the present contract expires in 1987. The present Hoover allottees are interested in developing the maximum power potential from the powerplant at the earliest possible time and we assume they will support the proposed uprating program.

Senator Hecht

Question No. 2: The Administration's opposition to S. 448 is at least partly premised on the argument that agricultural water users should bear more of the costs of the project. However, later in your testimony you recommended that in regards to the proposed visitor improvements (including a new highway bridge across the Colorado) such costs should be borne by power users. Would you please explain the Administration's rationale for these conflicting opinions in opposition to the use of power revenues for irrigation but support of power revenues for the visitor facilities and the bridge?

Response: We appreciate your concern that our positions on S. 268 and on S. 448 appear to be in conflict. In our testimony for S. 268, we support the use of power revenues to repay the costs of the improvements to the proposed visitor facilities and the new highway bridge across the Colorado River below Hoover Dam. The most important aspect concerning visitors at Hoover Dam is safety. The present heavy traffic flow conditions are causing considerable safety problems at the dam for visitors and for operation and maintenance activities. Modifications to the visitor facilities are necessary to alleviate this problem. As you know when Hoover Dam was built in the 1930's, heavy truck traffic and current visitor traffic were not considered for the existing facility. This position is justified also on the basis that most of the visitors to Hoover Dam are from the area served by the power generated from the Hoover Powerplant and are, therefore, paying for the facilities indirectly through the purchase of power. Therefore, it has been determined by this Administration that the new highway bridge across the Colorado River below the dam would alleviate present safety problems over the dam.

In contrast, S. 448 provides facilities that would modernize and improve the supply and distribution system of the Belle Fourche Project. The proposed program would restore the reliability of the system, reduce annual operation and maintenance costs, and conserve irrigation water by reducing seepage losses and operational wastes. Essentially, the Belle Fourche irrigators would benefit directly from the proposed program. It is our policy, therefore, that when direct beneficiaries can be identified, they should pay the costs. As S. 448 is drafted (based on January 1981 price levels), the irrigators would repay about $11.7 million of the $42 million of project costs, and the balance or $30.3 million, would be paid from future net power revenues. As you can see, the Federal Government and the taxpayers would carry most of the risk and the financing costs associated with the Belle Fourche program. We believe that the costs of the program for the Belle Fourche project should be paid by the direct beneficiaries. On that basis, it would be in line with our policy for the regular loan program under the Rehabilitation and Betterment Act of 1949, as amended and the Small Reclamation Projects Act of 1956 as amended.

Senator McClure

Question No. 1: During the course of the hearing on S. 448, Senator Abdnor described the similarities between the Belle Fourche Project and the Riverton Project. As you know, the Riverton Project was reauthorized as a unit of the Pick-Sloan Missouri Basin Program by the Act of September 25, 1970 (Public Law 91-409), to facilitate a rehabilitation program and to allow financial assistance from the new power revenues of the Missouri Basin Project. A similar program would be authorized in S. 448 for the Belle Fourche Project. Please provide a comparison of costs and related reimbursements between the two projects. Would the Administration support enactment of P.L. 91-409 if it were introduced as a bill in the 98th Congress?

Response: Similarities between the Belle Fourche Project and the Riverton Project stem only from the language used in the Act which reauthorized the project as the "Riverton Unit" and placed it in the Pick-Sloan Missouri Basin Program (P-MSBP). Similar language in S. 448 places the existing "Belle Fourche Project" under the P-SMBP and reauthorizes it as the "Belle Fourche Unit." To establish comparison of costs and related reimbursements between the two projects, we used October 1983 price levels and a 50-year payback from the water users. As I testified earlier, the costs in the legislation were tied to 1981 price levels and the language in the bill could result in a 30-year payback for the Belle Fourche water users. A comparison follows:

	Estimate Riverton Unit 1970	Riverton Unit 1983	Estimate Belle Fourche Unit 1983
Total cost	$12,116,000	$45,880,000	$49,900,000
Repayment by water users 50 years	6,500,000	6,500,000	11,750,000
Repayment by P-SMBP power	5,616,000	39,380,000	38,150,000

While the inflationary effects may not be as great as experienced for the Riverton Unit, you can readily see that the fixed cost contract obligation places all of the escalation on the power users.

Current Administration policy stresses some form of cost-sharing by the State or the existing organization involved. Because of the change in Administration's policy, legislation similar to P.L. 91-409 (the Riverton Unit) would be difficult to support in the 98th Congress if the current policy is not followed. An incentive through cost-sharing in some form through the State or the contracting entity would be helpful.

Senator McClure

Question No. 2: Last year, the Administration supported a project authorization which required a minimum 76% Federal grant for a municipal and industrial water supply system. In the case of the Belle Fourche proposal, project beneficiaries would repay as much as they could (approximately 30%) with the remainder being repaid to the Treasury from power revenues. What are the reasons behind the apparent discrepancy in position on the part of the Administration?

Response: The proposed municipal and industrial water supply system referred to is assumed to be the WEB Pipeline Project in South Dakota. As you are aware, in an attempt to reestablish the Federal program in South Dakota, the Administration has worked with the Congress and the State of South Dakota to develop an acceptable plan within the bounds established by that Act. The Bureau of Reclamation has had informal discussions with officials from the Department of Agriculture concerning several issues in financing the non-Federal share of the WEB facilities. These issues are still being reviewed by the Department. As for the Belle Fourche Project which was authorized and constructed in the early 1900's making it one of the oldest projects developed by Reclamation, we take pride in this project. The problem we have is our longstanding policy concerning rehabilitation and betterment work for such Federal irrigation projects which must be borne by the project beneficiaries as was discussed in Senator Hecht's Question No. 2.

Senator McClure

Question No. 3: In regard to Safety of Dams problems, does the Bureau have an established procedure at each structure to notify local authorities and citizens of an impending failure?

Response: The Bureau of Reclamation has completed approximately 75 percent of the Emergency Preparedness Plans (EPP) for its major dams. The remainder are scheduled to be completed by October 1984. The EPP's identify and provide instruction for notification of appropriate Federal, State, and local authorities in event of potential or actual dam emergencies.

Senator McClure

Question No. 4: On page 4 of your statement on S. 672, you state, "The long range effects of correcting safety problems without cost sharing or reimbursement is to make all replacement of existing investment free to its users and beneficiaries, and place the total cost on the general taxpayer." Would you explain the justification for such a statement in light of the explicit language in Section 4(a) of the Safety of Dams Act of 1978 which states:

> "Costs heretofore or hereafter incurred in the modification of structures under this Act, the cause of which results from age and normal deterioration of the structure or from nonperformance of reasonable and normal maintenance of the structure by the operating entity shall be considered as project costs and will be allocated to the purposes for which the structure was authorized initially to be constructed and will be reimbursable as provided by existing law."

Response: Definitely, all expenses resulting from work to correct for aging, normal deterioration, or neglect of a dam are treated as a project cost, as stated in Section 4(a) of the Safety of Dams Act of 1978. The statement in question referred to the potential for dams to be periodically upgraded as the state-of-the-art advanced, thereby giving the project beneficiaries extended use of the facilities at the expense of the general taxpayer.

Senator McClure

Question No. 5: Is it the Administration's purpose in requiring repayment contracts for safety of dams costs to also subject irrigators to the acreage limitations of the reclamation law even though the water users may have paid out their original contractual obligations? Do you have a suggestion for an amendment to S. 672 which would exempt water users from the acreage limitations of reclamation law which would otherwise be imposed as a result of safety of dams repayment contracts?

Response: The Reclamation Reform Act of 1982, Section 213, provides that the ownership and full cost pricing limitations "shall not apply to lands in a district after the obligation of a district for the repayment of the construction costs of the project facilities used to make project water available for delivery to such lands shall have been discharged by a district. . . ." Therefore, when a Safety of Dams project is involved, the new Act would not apply if the district had paid out its previous contract obligations.

The Department does not intend to ask for amendment of the Safety of Dams Act to exempt projects from the new Act if districts have not completed repayment of their contractual obligations.

Senator McClure

Question No. 6: In both the amendments to S. 268 and S. 672, the Administration would establish a new interest rate for computing repayment obligations? What is the current law, and rates, and what would be the rates under your proposed amendments?

Response: There is no general current law that would be applicable in these situations. The interest rate for project repayment is generally established when authorizing legislation for the project is passed by Congress. In the absence of specific legislation providing for the repayment interst rate, current executive policy provides an interest rate formula which results in a rate of 9½ percent for FY 1983. A proposed amendment to the formula was published in the Federal Register on February 9, 1983, that would increase the FY 83 rate to 13 percent if it were in effect.

It is not possible to state what the interest would be for a project under the proposed amendments without knowing or assuming a cost schedule and having the Treasury Department compute the specific rates. If construction occurs in more than 1 fiscal year, the rates computed for the months preceding the fiscal years in which costs are incurred must then be averaged and weighted by the expenditures in each year.

Senator McClure

Question No. 7: Under the Administration's proposed amendments to S. 672, project beneficiaries would be required to pay 50 percent of design costs before construction on dam safety work could begin. It is conceivable that on some projects, even 50 percent of design costs would be beyond the ability of the water users. In those instances, what would the Secretary propose to do since he would be prohibited by law to begin safety work?

Response: The Administration's proposed amendments to S. 672 recognize that not all beneficiaries have the capability to repay all of their proportionate share of the safety modification costs. Irrigation water users would share in costs up to their ability to repay with the remainder being forgiven by the United States. This would include the costs of project design. Other project beneficiaries are expected to have sufficient financial capability to repay their proportionate share of dam safety modification cost.

Senator McClure

Question No. 8: The Administration would provide authority under the Safety of Dams program for acquisition of flood affected lands. Do you propose that the Secretary has the authority for condemnation? Under some circumstances, would not the Secretary be in the position of seeking a repayment contract with a farmer in order to pay that same farmer for the acquisition for condemnation of his own land?

Response: We assume that under existing authority, if the need to acquire additional land as a result of modificiations made to a Reclamation project dam which were acquired by a safety of dam action, the Secretary would already possess the right of eminent domain (condemnation) under the authority of the Constitution and the Reclamation Act of 1902, as supplemented and amended. However, under our present policy, we are not proposing to acquire any lands above the elevation of the 1:500 flood, and to only acquire a flood easement between 1:100 and 1:500 elevations. In the event any lands above the 1:500 level are flooded, we would propose to pay damages as they are claimed. Any fee acquisition in the areas above 1:100 or higher would probably only be from willing or insistent sellers. A more direct response to your last question would be, no, we do not foresee a water user being assessed repayment costs to cover the acquisition by condemnation of his own land.

Senator Nickles

Question: In order to clarify the record further, I would appreciate your providing to the Committee definitions of the terms "preference power or preference customer" and "project power" as used in relation to the reclamation law. It would also be helpful to explain the differences between operation and maintenance activities and rehabilitation and betterment programs.

Response: The term "project power" or as sometimes called "project-use power" as used in the Reclamation acts which authorize construction of Reclamation projects and the marketing of surplus electric power generated therefrom, has been interpreted as meaning power for main canal conveyance pumping designated as miscellaneous electric loads directly associated with Reclamation irrigation and drainage operations.

Electric power surplus to the needs of Reclamation projects is delivered to the Power Marketing Agency (PMA) for marketing as commercial power. Legislation requires that preference in the sale of this power be given to municipalities and other public corporations or agencies and also to cooperatives and other nonprofit organizations financed by REA. This group is commonly referred to as "preference customers" when we speak of marketing Federal power. Irrigation districts organized as public corporations or agencies qualify as preference-type customers and are treated accordingly along with all other preference-type customers in the distribution of available Federal power.

Differences between operation and maintenance activities and rehabilitation and betterment programs are as follows:

> The operation and maintenance activities are those activities required to maintain Reclamation facilities in good operating conditions, including repairs to and replacements of machinery. Such O&M activities are essential to continued reliable operation of these facilities. The routine maintenance of and testing a generator may show a need to replace some part of the generator. The replacement of that part "In-kind" would be an O&M activity because it is needed for the continued operation of the generator.
>
> The rehabilitation and betterment (R&B) program is one in which we explore viable opportunities to improve Reclamation existing facilities by modernizing and uprating our facilities. Due to technological developments, improved design, and economic consideration it has often been desirable to install new generator stator windings or turbines with higher rating than previously installed.
>
> The two programs are commonly grouped together, but the primary difference between the two is: the O&M program focuses on maintaining existing equipment in a good and reliable operating condition and the R&B program focuses on improvements, modernization and increase outputs.

Questions and Answers from the Senate Hearing Transcript of March 24, 1983 on S. 268

Question: Is there a demand for energy at each of the proposed powerplant sites?

Response: The Western Area Power Administration has indicated that they can market all of the energy produced from the hydroplants included in S. 268 in their jurisdictional area. Bonneville Power Administration has also indicated a need for power. Several States have indicated an interest in a cooperative development of the hydropower resources such as the States of Idaho, Nevada, Arizona and California. Pacific Gas and Electric has contracted with the Solano Irrigation District to purchase all of the energy from the Monticello Powerplant.

Question: Will energy from the proposed powerplants be sold at the avoided cost?

Response: Energy from the Federal plants will be sold through the power marketing agencies which will be marketed through normal Federal power marketing procedures. Power from non-Federal plants will be marketed according to Public Utility Commissions and where applicable the Federal Energy Regulatory Commission policies. The marketing of power developed from powerplants constructed by the Federal Government with non-Federal contributed funds would be controlled by State regulatory agencies such as the Public Utility Commissions for intrastate markets and by the Federal Energy Regulatory Commission for interstate markets.

Attached is a table showing the status of all projects included in S. 268 and a list showing the status of studies and reports of each project.

FERC Status
S. 268

Powerplant	Permit or License Status	Entity	Status
Friant Units	License issued	Friant Power Authority	Under final design-begin construction in Fall 1983
Whiskeytown	Permit issued	City of Redding	Application for license made. (informal information indicates that a license ~~was~~ recently issued)
Yellowtail	Application for permit	Mitchell Energy Energenics Central Montana G & T	Holding issuance of permit at Reclamation request
Red Bluff	Permit issued	City of Redding	Environmental problems
Stony Gorge	License issued	City of Santa Clara	Working on final designs
Palisades	Application for permit	State of Idaho	State is working with Reclamation
Anderson Ranch	No	-	-
Minidoka	No	-	-
Boca	Permit issued	Truckee-Donner PUD	-
Prosser	Permit issued	Truckee-Donner PUD	-
Monticello	License Issued	Solano Irrigation District	Under Construction

3/22/83

Status of reports on hydropower projects
listed in S. 268

Friant - Special (5-10-78): Appraisal (1-4-80)

Whiskeytown - Special (5-1-79): Appraisal (1-8-80)

Yellowtail - Special (5-24-78); Appraisal (9-15-81)

Red Bluff - Appraisal (10-15-81)

Stony Gorge - Appraisal (11-14-81)

Monticello - Special (5-27-77)

Palisades - Special (3-11-78) - Advance Planning underway in FY 1983
(Scheduled for Completion July 1984)

Anderson Ranch - Feasibility - Submitted to OMB 12-21-82

Minidoka - Feasibility - Submitted to OMB 1-3-83

Boca - Appraisal - Being revised by regional office. Expect release 5-1-83

Prosser - Appraisal - Being revised by regional office. Expect release 5-1-83

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APPENDIX II

Additional Material Submitted for the Record

WYOMING
EXECUTIVE DEPARTMENT
CHEYENNE

ED HERSCHLER
GOVERNOR

March 17, 1983

The Honorable Don Nickles
Chairman
Subcommittee on Water and Power
3104 Dirksen Building
Washington, D. C. 20510

Dear Senator Nickles

Thank you for providing me an opportunity to comment on Senate 268. Due to previous commitments, I will be unable to testify. However, I would like to offer a few general remarks.

Increasing the use of our renewable resources, such as hydro-power, is a wise investment of our financial resources, and therefore, I believe that Senate 268 is a bill which should be supported. However, I also believe that the United States Congress should provide sufficient funding for the projects it has previously authorized.

In particular, I am referring to the Buffalo Bill Dam enlargement, which was authorized by Public Law 97-293. Congress authorized the enlargement of the dam and replacement of the powerplant at this facility. The State of Wyoming and the Department of Interior are negotiating a cost-sharing agreement to finance the construction of this project. The State of Wyoming has already appropriated $47,000,000 as our share of this $107,000,000 project. To date, no federal funds have been appropriated for project construction.

The Department of Interior has included about $3,000,000 for Buffalo Bill Dam in its FY-1984 budget request. This is barely enough to remove the retired power plant, let alone to make a real dent in the enlargement of Buffalo Bill Dam. We need more than $3,000,000 in federal funds to get moving on this project. I would hope that your committee would see fit to increase Interior's budget request for Buffalo Bill Dam to at least equal to that which Wyoming has set aside instead of the $3,000,000 Interior has requested. The State of Wyoming is ready to proceed, but it is difficult to pull a two-horse wagon when one horse has decided to sit down.

Once again, thank you for providing me with an opportunity to comment on S. 268.

Yours sincerely,

American Farm Bureau Federation

WASHINGTON OFFICE
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SUITE 800
WASHINGTON, D.C. 20024
AREA CODE 202 - 484-2222

March 28, 1983

Honorable Don Nickles, Chairman
Subcommittee on Water and Power
Senate Committee on Energy and Natural Resources
Washington, DC 20510

Dear Mr. Chairman:

The American Farm Bureau wishes to express its support for S. 268, legislation to authorize the Secretary of Interior to construct additional generating facilities at existing Bureau of Reclamation projects in the Western States.

We appreciate the opportunity to express our views with regard to S. 268, and ask that this letter be made a part of the hearing record on this legislation.

Sincerely,

John Datt

John C. Datt
Secretary and Director
Washington Office

lh
cc: Subcommittee Members

Comments
of the
AMERICAN PUBLIC POWER ASSOCIATION
on
S. 268
Submitted to the
Subcommittee on Water and Power
Senate Committee on Energy and Natural Resources

April 5, 1983

The American Public Power Association is the national service organization representing over 1,750 local public power systems throughout the United States. Public power systems, together with rural electric cooperatives, are entitled to a preference in the marketing of surplus power produced at federal dams. Thus, APPA has an obvious interest in S. 268, a bill to authorize the Secretary of the Interior to construct, operate, and maintain hydroelectric powerplants at various existing water projects, and for other purposes.

As noted in the attached resolution, which was adopted by APPA's Legislative and Resolutions Committee in February, 1983, and will be presented to the full membership at the Association's annual business meeting in May, APPA strongly supports federal development of our nation's hydroelectric resources. The Association, however, recognizes that, for any number of reasons, past practice may not govern future action, and, therefore, alternatives must be explored.

Last year, APPA established a task force to consider possible alternatives. The task force continues to examine alternatives as they surface, as can be seen from reviewing the final "Resolved" clause in the attached resolution. In considering all alternatives, the task force has been guided by one principle -- the nation's rivers are a public resource, and, to the maximum extent possible, the resource should be developed, and the benefits enjoyed, by the public without passing through the toll gates of private, for-profit institutions. This principle, of course, is one of the underlying reasons the preferential treatment for local public power and rural electric cooperative systems was granted by Congress in over thirty statutes relating to federal power development.

One alternative to federal development addressed by the task force and endorsed in the enclosed resolution is to provide the preference customers with the right of first refusal to develop power at existing federal dams where the federal government, for whatever reason, elects not to develop that power. Such customers would then be entitled to power produced from the project in proportion to the funds contributed.

In testifying on S. 268 on March 24, 1983, Robert N. Broadbent, Commissioner of the Bureau of Reclamation, urged the Committee to amend S. 268 so that such an alternative could be pursued. While we have endorsed that alternative, we far prefer to see S. 268 enacted in its present form.

The alternative favors the rich over the poor. The larger public power and rural electric cooperative systems would have an obvious advantage in developing projects at federal dams. The preference systems in the smaller, more rural communities -- communities which have benefited immensely from the federal power program -- might not be able to muster the resources to participate in project financing.

The alternative also favors systems in close proximity to federal dams. Congress has consistently demanded that federally developed power be marketed to ensure its most widespread use. This was done in order to get low cost electricity into sparsely populated areas far distant from the source of that power. It seems logical that systems close to the federal dam in question would be most likely to take steps to develop that site, obtaining for their own use the power produced. Thus, the alternative runs counter to longstanding federal policy of widespread use.

If the Committee pursues this alternative, either in S. 268 or in other legislation addressing the question of alternatives to federal development in a generic fashion, we would urge that care be exercised to ensure that preference is not abused. Recent experience of the Federal Energy Regulatory Commission illustrates the problems which might be encountered.

The Federal Power Act requires FERC to grant a preference to preliminary permit and license applications submitted by states and municipalities. Recently, as hydropower has become more and more attractive due to increased prices of other fuels and numerous congressional incentives to develop this domestic resource, efforts have been made to undermine the municipal preference. Private developers, for example, have formed "partnerships" with municipalities under which the municipality would apply for a permit or license and thereby receive preferential treatment. The real party in interest, however, is the private entity, the municipality serving only as the "front," taking no responsibility for the project and receiving only token payments for the use of its name. FERC has been struggling with this problem for some time. With foresight, the Congress can avoid these problems if and when it elects to pursue alternatives for the development of federal dams.

Specifically, the Congress should ensure that the right of first refusal is extended only to preference customers who would be eligible for allocations of power by the power marketing administrations. This right should not be extended, for example, to states or cities which are not providing electric utility service. The right of first refusal should be extended, of course, not only to preference entities fulfilling full utility responsibilities, that is, distribution systems, but to generation and transmission cooperatives as well as joint action agencies.

Twice before, APPA has supported efforts by this Committee and the Senate to enact a bill substantially identical to S. 268. It is extremely unfortunate that these efforts have not resulted in the enactment of such legislation -- unfortunate, both because valuable power is flowing away downriver each day, and because inflation is taking its toll on the ultimate cost of each project authorized in S. 268. One need only compare the authorization amounts in S. 306, the 97th Congress counterpart to S. 268, with the amounts contained in the present bill to observe this. No further delays should be tolerated.

We note and support the conditional authorization for five of the projects contained in the bill: Friant, Whiskeytown, Red Bluff, Stony Gorge, and Monticello. These projects, while authorized for federal development, are held open for private development until October 1, 1985, to provide interested parties sufficient time to obtain licenses from the Federal Energy Regulatory Commission.

Several nonfederal parties have already taken steps to develop these projects. The City of Santa Clara, California, holds a license on the Stony Gorge project. Truckee-Donner Public Utility District in California has preliminary permits on Boca and Prosser, and recently filed a license application for the former site. The City of Redding, California, has received a license from FERC for the Whiskeytown unit and holds a preliminary permit for Red Bluff. The City intends to file a license application for that project in the near future.

These public power systems have already expended funds to develop these projects. We believe it is appropriate to allow them to proceed with their plans. We therefore support the conditional authorization language. We are, however, somewhat concerned that license applications for these projects might be pending, but not finally acted on by FERC, by the deadline contained in the bill. We would thus suggest that the conditional authorization language of Section 1 be modified to hold open the window for nonfederal development until a date certain or until FERC has taken final action on a license application filed on or before that date.

In conclusion, APPA strongly endorses S. 268. We continue to believe that the federal government has a legitimate role in developing our hydroelectric resources. The Senate Committee on Energy and Natural Resources has consistently recognized and supported that role. We urge the Committee to act favorably on S. 268 so that the projects authorized in that bill may move forward to construction.

COST SHARING FOR CONSTRUCTION OF FEDERAL HYDRO PROJECTS

WHEREAS, the historic policy of Federal rather than private development of our national hydroelectric resource has ensured that these resources were developed in a cohesive and comprehensive manner designed to capture the maximum possible benefits for the public, and

WHEREAS, due to current economic conditions, Federal development may not be possible and thus to meet local and regional needs, alternatives to Federal development will be required, and

WHEREAS, existing Federal dams are public resources and undeveloped and underdeveloped water and power potential should be preserved for public use and benefit, and therefore development alternatives must be consistent with the long-standing Federal policy of providing benefits of these resources directly to the public rather than passing these benefits to private interests, and

WHEREAS, this Federal policy is contained in numerous Federal statutes which direct that Federal power be marketed on a preferential basis to consumer-owned, nonprofit public power utilities and rural electric cooperatives, and

WHEREAS, this policy can be maintained and the preservation of these benefits for the public can best be accomplished by granting the consumer-owned, nonprofit public power utilities and rural electric cooperatives the first option on financing such projects and marketing the power produced to their consumers in all cases where Federal development is not possible;

NOW, THEREFORE, BE IT RESOLVED: that the American Public Power Association continues to vigorously support Federal financing and development of all economically viable hydroelectric projects at both Federal dams and at undeveloped and underdeveloped sites but recognizes that in some cases alternatives to Federal development must be found; and

(OVER)

BE IT FURTHER RESOLVED: that where Federal development is not possible, consumer-owned, nonprofit public power utilities and rural electric cooperatives engaged in providing electric utility service and accepting full utility responsibility must be granted a right of first refusal to contribute development funds and such systems shall be entitled to power produced proportionate to their financial contributions; and

BE IT FURTHER RESOLVED: that because some proposed new approaches to nonfederal financing involve complex questions which must yet be resolved, the APPA task force on Hydro Development and Federal Power Marketing be directed to consider the details of alternatives and submit a more detailed recommendation at the Association's Annual Conference in May, 1983.

--Adopted by the Legislative and Resolutions Committee of the American Public Power Association February 9, 1983, in Washington, D.C.

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

1957 E Street, N.W. • Washington, D.C. 20006 • (202) 393-2040 • TWX: 710-822-9406 AGC WSH

RICHARD S. PEPPER, *President* JAMES D. PITCOCK, JR., *Senior Vice President* VERNIE G. LINDSTROM, JR., *Vice President*
LARRY F.C. CHING, *Treasurer* HUBERT BEATTY, *Executive Vice President*

April 12, 1983

The Honorable Don Nickles
Chairman
Water and Power Subcommittee
Committee on Energy and Natural Resources
U. S. Senate
Washington, D.C. 20515

Dear Mr. Chairman:

Enclosed please find copies of the statement of the Associated General Contractors of America on S. 268, a bill authorizing the Secretary of the Interior to construct hydropower facilities at existing federal dams, and on S. 672 and S. 739, bills providing increased appropriations to modify Reclamation Dams for purposes of safety.

We would appreciate your inclusion of this statement as a part of the formal hearing record on the subject bills.

Sincerely,

Susan J. Loomis

SUSAN J. LOOMIS
Associate Director
Congressional Relations

SJL/lad
Enclosure

THE FULL SERVICE CONSTRUCTION ASSOCIATION FOR FULL SERVICE MEMBERS

Statement of

The Associated General Contractors of America

Submitted to the

Committee On Energy and Natural Resources

United States Senate

April 5, 1983

On The Topics Of

Construction, Operation And Maintenance

Of Reclamation Project Hydroelectric Powerplants S. 268

And

Amendments To The Reclamation Safety Of Dams Act S. 672 And S. 739

AGC is:

- More than 32,000 firms including 8,500 of America's leading general contracting firms responsible for the employment of 3,500,000-plus employees;
- 112 chapters nationwide;
- More than 80% of America's contract construction of commercial buildings, highways, industrial and municipal-utility facilities;
- Approximately 50% of the contract construction by American firms in more than 100 countries abroad.

The Associated General Contractors of America (AGC) represents more than 32,000 firms including 8,500 of America's leading general contracting companies which are responsible for the employment of more than 3,500,000 employees. These member contractors perform more than 80% of America's contract construction of commercial buildings, highways, industrial and municipal-utility facilities.

AGC supports Senate Bill S.268 which would authorize the Secretary of the Interior to construct, operate and maintain hydroelectric power facilities at 11 existing dams throughout the western United States. Additionally, AGC supports two related bills, S.672 and S.739 which would provide for increased appropriations for the Reclamation Safety of Dams Act of 1978 and provide authority to replace as well as modify reclamation dams for purposes of safety. The bills would also allow congressional committee approval of modification reports in less than the required 60 day period.

S.268 WILL REDUCE AMERICAN DEPENDENCE ON FOREIGN OIL AND GAS

Swift passage of S.268 will enable the Department of the Interior to develop hydropower resources at existing federal sites. Small and mid-size hydroelectric projects are inherently more cost-effective than coal or oil fired generating stations, especially when life-cycle costs are computed based upon renewable versus non-renewable energy sources.

The amendments to S.268 suggested by the Department of the Interior are practical and economical and will bring the designated list of powerplants fully up to date with current permit and/or construction approvals. AGC also endorses the Bureau of Reclamation's suggested amendments, which shift emphasis toward selected federal reservoir sites including Whiskeytown, Yellowtail Afterbay, Red Bluff Diversion, Palisades, Anderson Ranch, and Minidoka, while adding projects at Guernsey and Hoover Dams. The remaining hydropower sites will most likely be fully developed by non-federal interests.

S.672 AND S.739 WILL ENSURE BUREAU OF RECLAMATION COMPLAINCE WITH FEDERAL GUIDELINES FOR DAM SAFETY ISSUED JUNE 25, 1979

Timely enactment of S.672 and S.739, bills which raise the appropriations for dam modification or replacement, would be consistent with the President's program for economic recovery, while benefiting local populations by improving dam safety. The Bureau of Reclamation's safety program is targeted toward the reduction of economic loss due to natural or man-made accidents, with special consideration given to the protection of human life. AGC urges Congress to pass these measures promptly, thereby empowering the Bureau to confront, with speed and efficiency, any dam safety hazards which may arise.

Approximately 40 additional dams have been examined by safety evaluation personnel of the Bureau of Reclamation to identify possible structural, operational or geographical deficiencies. An estimated $550 million will be needed for the additional work in upgrading these older structures. Therefore, increasing the appropriation ceiling to $650 million represents prudent planning in areas where loss of life or property damage would occur in the event of flood or earthquake.

The Reclamation Safety of Dams Act has been a workable means of correcting unsafe conditions at many of the decades-old dam structures. Traditionally, Congress had authorized modifications to dams on a case-by-case method; however, the Act streamlined the process, allowing the Secretary to commence dam modifications (for purposes of safety) with dispatch. The new legislation is designed to authorize rehabilitation of 48 structures over the next few years.

Prompt action is needed to mitigate structural or design deficiences before a crisis occurs. The Jackson Lake Dam on the Snake River in Wyoming, with documented statistics pointing to a substantial probability of failure, poses a very real threat to its downriver valley. The Pactola Dam and Reservoir, just west of Rapid City, South Dakota, holds back thousands of acre-feet of water from a downtown urban area. There have been problems with the Pactola restraining barrier within the past few years. On Salt River and Verde River in Arizona, east and north of Phoenix, a series of dams are in want of improvement. Structural failure here could precipitate a domino effect on the balance of the watercourse.

Over the past few years, AGC has been pressing the federal government to re-evaluate its role as manager of the "physical plant" of the United States. The current proposals to shore-up existing waterway structures and to develop in-place hydropower capabilities are crucial, but only initial, steps in our country's re-building movement.

No concrete estimates exist concerning the cost of upgrading non-federal dams to a safe condition. There are over 65,000 of these dams which are higher than 25 feet or impounding more than 50 acre-feet of water. The Army Corps of Engineers classifies 8,794 of these structures as "high hazard" because of their potential to do damage to human life and property.

The estimated cost of upgrading 48 Bureau of Reclamation dams (those considered substandard are approximately 25% of the BuRec inventory) is at least $650 million, or an approximate investment of $13.5 million per unit. When this average investment is applied to the approximately 3,000 non-federal and Army Corps of Engineers Dams considered "unsafe" by the Corps, the cost of repair is $40.5 billion. An additional 20,000 dams have serious defects requiring corrective maintenance. A conservative investment of $.5 million for each of the marginal dams would total an additional $10 billion. AGC estimates the country's dollar needs for safety measures on all dams and reservoirs to be $83.5 billion over the next 10 years.

AGC ADVOCATES THE REBUILDING OF AMERICA

When viewed as an aggregate, the nation's infrastructure is a publicly-owned investment which must be maintained in a safe condition. Owners are, by law, responsible for the creation of security (freedom from danger) for their property and for the users of their property. Like an absentee caretaker, the nation's management has permitted our public works projects to deteriorate. Two deserving issues, property safety and energy independence, have been recognized. Congress must now exercise its options, by the passage of S.268 and S.739, for the long-term security and stability of our basic natural resources.

California Farm Bureau Federation
1601 Exposition Boulevard
Sacramento, CA 95825

March 24, 1983

Honorable Don Nickles, Chairman
Subcommittee on Water and Power
A-420 Immigration Building
Washington, D.C. 20510

Re: S 268 - SUPPORT

Dear Senator Nickles:

The California Farm Bureau Federation SUPPORTS S 268 by Senator McClure.

California is still dependent on oil-fired generation for much of its electricity. In many of the areas dependent on oil burning, air pollution is also a serious problem. Even some electricity used in California is generated by coal.

Electricity generated by falling water has traditionally been, as is expected to be in the foreseeable future, the source of both our least expensive and our environmentally cleanest electricity.

Because important oil was so cheap during the time of construction of some dams in this state, hydro-generation was thought to be uneconomic. Now oil costs from twenty to fifty times more than it cost twenty years ago, and in addition to the cost of fuel factor, air pollution is now a much greater concern.

We believe there is no question but what hydroelectric generating facilities should be installed in the California dams as authorized in S 268, and we ask the bill receive the support of your Committee.

The California Farm Bureau Federation is a private, non-governmental, dues-supported organization with a membership approximately 100,000.

Sincerely,

HENRY J. VOSS
President

STATEMENT OF MORGAN D. DUBROW
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION
BEFORE
THE SUBCOMMITTEE ON WATER AND POWER
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
March 24, 1983

Mr. Chairman and members of the Subcommittee, I am pleased to submit this statement in support of S. 268, a bill authorizing the Secretary of the Interior to construct hydroelectric power plants at various existing water projects.

For the record, I am Morgan D. Dubrow, Senior Staff Engineer of the National Rural Electric Cooperative Association (NRECA). NRECA is the national service organization representing more than 1,000 rural electric systems in 46 states. These systems, mostly all cooperatives, serve more than 25 million consumers in 2600 of the 3100 counties in the United States. Members of NRECA provide electricity to over 70 percent of the land area of this nation.

In February, NRECA concluded its 41st annual meeting in Las Vegas, Nevada. During the course of this meeting, the delegates passed a number of resolutions in support of expanding the availability of hydroelectric power facilities at existing water projects as well as at locations that have been selected after comprehensive study by the Executive and Legislative bodies of Government. Listed below are two resolutions in support of development of hydroelectric power adopted by our members:

> RESOURCE DEVELOPMENT AND FEDERAL MULTIPLE-PURPOSE PROJECTS--The critical need for energy in our nation today and the near future necessitates the maximum use of the falling waters in our nation, a replenishing resource that requires no further research and development to harness.
>
> We urge the Congress to appropriate the funds necessary to complete the planning, the environmental and feasibility studies, and to authorize and appropriate funds to construct all feasible multipurpose projects as rapidly as practical, and also install electric generation in all existing non-hydroelectric projects where feasible.

FINANCING FOR HYDRO GENERATION--We recognize the urgent need for the development of additional electrical generation utilizing renewable resources such as conventional and pumped storage hydroelectric generation with the resultant conservation of exhaustible mineral resources.

We also recognize that the cost of power from hydroelectric generation is not subject to the inflationary effects of fossil fuel costs; hence, the use of such generation reduces the magnitude of electric rate increases.

We emphasize our support of Sec. 5(a) of the bill which reiterates the long established law and policy of distributing and marketing power from Federal hydroelectric facilities to preference customers through Federal power marketing agencies. Further, we endorse the concept repeated in Sec. 5(b) that Federal power plants authorized in the bill be "financially integrated with and the power marketed under rate schedules in effect. ...".

We note that the bill also confirms and supports the long established law and policy (Sec. 6) of protecting valid existing water rights and water service contracts.

We also support the authorization of the necessary appropriation of funds required to construct and operate these power plant units, including the cost of replacement power.

The U.S. Army Corps of Engineers reports there are 54,000 MW of potential hydroelectric power that could be developed at existing large dams across the nation. According to the National Hydroelectric Power Resources Study, some of these are currently generating power and full development of the incremental potential could yield an additional capacity of some 94,000 MW, with an average annual energy generation exceeding 223,000 GWh. The Corps also estimates that another 14,000 MW of potential hydroelectric power could be developed at small dams. The National Hydroelectric Power Resources Study also reports that there are some 4500 potentially feasible, undeveloped sites which, if fully developed for hydro power, could produce another 354,000 MW with an estimated average annual energy greater than 935,000 GWh.

The Federal Energy Regulatory Commission estimates only about one-third of the nation's hydroelectric power potential has been developed. The remaining two-thirds has an annual energy production potential of approximately 404 billion kilowatthours. This is equivalent to 66 1,000 MW coal-fired plants or nuclear plants operating 70 percent of the time. It is also equal to 150 million tons of coal or about 800 million barrels of oil each year. The potential in oil equivalent of the undeveloped hydro in the 48 states exceeds 1 billion barrels of oil per year. Alaska's hydro potential alone adds the oil equivalent of another 1 billion barrels of oil annually.

Rural electric cooperatives have long supported a reasonable water development policy. Hydroelectric power provides electric energy from a renewable resource with minimal impact on the environment and helps America become energy independent. However, we still believe that continued development of our water resources will require some modification of positions taken by environmental groups and by the Environmental Protection Agency.

In closing, we support S. 268 and commend the Chairman and members of this Subcommittee for holding these hearings to expand specific hydroelectric power facilities. We appreciate the opportunity to submit our views.

Truckee Donner Public Utility District

Post Office Box 309 • 11570 Donner Pass Road • Truckee, California 95734
(916) 587-3896

April 4, 1983

Russell Brown
Senate Subcommittee on Water and Power
Dirkson Senate Office Building, Room SD360
Washington, D. C. 20510

Dear Mr. Brown:

Last week, I talked with a member of the Subcommittee regarding Senate Bill 268. It is my understanding that, on the 24th of March the Subcommittee held hearings at which Commissioner Robert Broadbent testified. It is also my understanding that the Commissioner asked that several projects be deleted from the bill, as local interests have either permits or licenses on file for developing such hydroelectric facilities.

I believe, after talking with David Gudgel, the Bureau of Reclamation recommends that Boca and Prosser be deleted from the bill. The Board of the Truckee Donner Public Utility District has just authorized the filing of the license application, and we are in the final stages of securing permission for hydroelectric development at these two facilities.

As Senate Bill 268 currently exists, we would have difficulties obtaining the license from FERC. We concur with Commissioner Broadbent that SB268 should be amended deleting all reference to Boca and Prosser Reservoirs.

I am enclosing documentation relative to this issue. I trust you will pass the information on to Senator Nickels and Senator McClure, and to other appropriate persons on the Committees involved. I will be calling you within the next few days to discuss this matter further and answer questions you may have.

Sincerely,

James A. Maass

James A. Maass, President
Board of Directors

JAM/smc
Enclosures
cc: Alan Cranston
Norm Shumway
Board of Directors
James M. Ward, General Manager
James E. Simon, Esq.
Ken Peters, James Hansen & Associates

United States Department of the Interior
BUREAU OF RECLAMATION
~~WATER AND POWER RESOURCES SERVICE~~
WASHINGTON, D.C. 20240

RECEIVED
NOV 12 1982
TRUCKEE DONNER P.U.D.
By______________

Ken Peters

IN REPLY
REFER TO: 720

NOV [illegible] 1982

Mr. James A. Maass
President
Truckee Donner Public Utility District
P.O. Box 309
Truckee, California 95734

Dear Mr. Maass:

Thank you for your letter of October 7, 1982, concerning the Districts' interest in hydropower development at Boca, Prosser and Stampede Dams. We assure you that the Department fully supports non-Federal development of hydropower resources on Bureau of Reclamation facilities.

The Bureau of Reclamation plans to recommend to Congress that Boca and Prosser powerplants be deleted from S. 306 to permit non-Federal development. As stated in our June 1, 1982, letter, in the event that S. 306 is passed by the Congress in its present form, we will recommend that Federal development not be funded in order that private interests can fund construction of the powerplants.

Hydroelectric facilities at Stampede Dam have been authorized for construction by Congress and congressional action would be required for non-Federal development. The Bureau plans to recommend to Congress that S. 306 contain language that will provide for non-Federal financial participation.

We appreciate your interest in hydroelectric power development and will assist you in your programs in any way we can.

Sincerely yours,

Jed O. Christensen
Acting Commissioner

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United States Department of the Interior
BUREAU OF RECLAMATION
WASHINGTON, D.C. 20240

CEIVED
1 1983

IN REPLY REFER TO: TRUCKEE DONNER P.U.D.

By____________________

JAN 25 1983

2/1/83

Mr. Jim Moore
Truckee-Donner Public Utility District
P.O. Box 309
Truckee, California 95935

Dear Mr. Moore:

This is to confirm our telephone conversation of January 24, 1983 regarding your concerns that a reconstituted S.306 would authorize the Bureau of Reclamation to construct powerplants at Boca and Prosser Reservoirs.

As I indicated, the Bureau has no plans to seek such authority at this time. I hope that this information will answer your questions and please don't hesitate to contact me in the future.

Sincerely,

H. W. Furman II
Special Assistant
to the Commissioner

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OFFICERS
Robert L. Donaldson, President
William Keiry, Vice-President
Alice D. Holmer, Secretary-Treasurer
Harold Nelson, Assessor

BELLE FOURCHE IRRIGATION DISTRICT
Belle Fourche Project of the Water & Power Resources Service
PHONE 605-456-2791
NEWELL, SOUTH DAKOTA 57760
- - - - - - - - -
Harold D. Skjoldal, Project Manager

DIRECTORS
Duane Odle
Walter Stumpf
Harold Nelson
William Keiry
Robert L. Donaldson
Daryld M. Williamson
Edward D. Baker

March 28, 1983

Hon. Senator Don Nickles, Chairman
Sub-Committee on Water and Power
Committee on Energy and Natural Resources
Senate Hart 713
Washington, D.C. 20510

Attn: Russ Brown

Mr. Chairman:

I would like to submit additional testimony for the record on two questions asked at the Senate Sub-Committee Hearing on S.448 held March 24, 1983.

The first question, "Why hasn't the Board of Directors of the Belle Fourche Project assessed enough O & M charges to cover the Rehabilitataion asked for in S.448?", and the second question asked, "Doesn't the repayment contract with the United States of America require such an assessment?".

My response to the questions is as follows: Article 8 of the 1949 Amendatory Repayment Contract ILR-1555, states that the District is responsible for the care, operation, maintenance of the irrigation works, subject to the supervision and approval of the Secretary of Interior. There is no mention or provision in the Contract regarding replacement or rehabilitation obligations.

The District has lived up to the terms of Contract and we feel has even gone beyond that required. The District has, over the years, replaced major structures and made improvements to the irrigation system, however the large expenditures required to bring the Project to acceptable present day water delivery efficiency standards cannot be assessed without causing undue hardship or ruination to landowners in the Project. I would like to point out that the landowners in the Project have paid back to the Federal Government the amount due on schedule, and in addition, the Government has collected well over $10 million in income taxes. I believe the taxes collected and annual repayments show a very excellent benefit cost ratio for the Project.

As you are well aware, the present day Bureau Project construction standards are so much higher now than the standards approved for the first Projects constructed at the turn of the century and thus giving a much higher water delivery efficiency percentage, as much as 25-30 percent higher than this

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Project. We all must be interested in, and work for the conservation of the precious water resources of our nation. The reauthorization and rehabilitation of the Belle Fourche Project will accomplish this goal and the benefits will accrue to all the citizens of this great nation.

The Belle Fourche Project, operated for over forty years by the United States Bureau of Reclamation, and now for over thirty years by the Project farmers, has proved its value to this arid area as presented by facts in testimony before your Committee; and with rehabilitation, will continue to do so in an even greater manner.

Sincerely,
Robert L Donaldson
Robert L. Donaldson, President
Board of Directors
Belle Fourche Irrigation District

NATIONAL WILDLIFE FEDERATION
1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

April 19, 1983

APR 2 6 1983

Senator Don Nickles
Chairman, Subcommittee on Water and Power
Commiteee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Please accept this letter for the record of the March 24 hearing of the Subcommittee on Water and Power on S. 448, the bill to authorize rehabilitation and new construction at the existing Belle Fourche irrigation project in South Dakota.

The National Wildlife Federation does not support the bill for many of the same reasons outlined before the Subcommittee last month by Commissioner Broadbent. Generally, this $42 million proposal is not in the nation's interest because its benefits will be much less than its costs.

In particular, NWF opposes any reauthorization of Belle Fourche as a unit of the Pick-Sloan Missouri Basin Program. Such reauthorization would result in hydropower customers served by the Missouri River dams repaying the majority of the capital costs of the rehabilitation. These are the costs assigned to irrigation that are judged to be above the Belle Fourche Irrigation District's ability to repay. Repayment of the federal investment in the Pick-Sloan Program is at such a slow rate than an Interior Department audit* predicted that only one-third would be repaid by the year 2078. Thus, Congress should not attempt to stretch Pick-Sloan power revenues even further at this time.

Sincerely,

Edward R. Osann

Edward R. Osann, Director
NWF Water Resources Program

---

*"Review of Repayment Status of Pick-Sloan Missouri Basin Program", Office of Audit and Investigation, Department of the Interior, July 1978.

cc: Bob Vanderlinde, President
South Dakota Wildlife Federation

Newell, S.D. 57760
April 1, 1983

Honorable Don Nickles, Chairman
Sub-Committee on Water and Power
Committee on Energy and Natural Resources
Senate Hart Bldg. 713
Washington, D.C. 20510

Dear Senator Nickles:

I would like to submit testimony for the record on S448, a bill to Authorize the Rehabilitation of the Belle Fourche Irrigation Project, located in western South Dakota.

I am a member on the Belle Fourche Irrigation District board of directors. However, I wish to express my views strictly as a land owner.

I was born on the project in 1925 and have operated a farm since 1947. The previous 22 years were spent growing up and working on the family farm.

Can you imagine how this project was built? By man and shovel, by mules, horses, and small fresnos and wagons. There was some concrete but mostly from wood. It was too far to haul rock and sand to make concrete.

Today they use concrete, asphalt, pipe, automatic measuring devices, and modern engineering. When it comes to earth moving, we have huge trucks and machines.

As a boy I remember the wooden siphons made out of redwood, also the wooden checks, turnouts, and drops. I remember ditchriders riding horses while delivering water.

In the 1930's, I remember the C.C.C. Boys replacing wooden structures with concrete. I remember them replacing flumes and wooden siphons. They didn't get them all done as the District still replaces some every year.

While the Bureau operated the project, they were kept busy rectifying problems which appeared but had not been foreseen.

I remember the Bureau digging drainage ditches because the seepage problem had not been foreseen, also the fencing of laterals, and grazing them with sheep to control the weeds and willows.

The Bureau operated the project over 40 years and the farmers have operated for 33 years. Both were able to maintain but not to modernize the project.

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Operation and maintainence requires much extra cost, being all canals and laterals are of earthen construction. This is because of vegatative growth, also by scouring of banks and channels. This is all in addition to the necessary structure maintainence and water delivery.

I still see main canals and laterals meandering along the contour of the land for one-half a mile or more, when five or six hundred feet of fill or pipe would get it across a steep draw.

The weeds, willows, and shrubs are still growing along the laterals. The laterals are cutting through the farms and causing smaller fields. I don't see any modern accurate measuring devices. I see water being delivered at 50% efficiency.

Only rehabilitation of the project will rectify these problems.

Just imagine being able to deliver 70% instead of 50% of the water. The advantages I see for a rehabilitated project are a reduction in operation and maintainence costs, complete control and accurate measurement of water, increased delivery capacity and timely delivery, less seepage and weed problems, improved field layout, better access, and less fencing problems.

The benefits from this will be reflected in our local towns, our trade area, and by all the citizens of this nation. All our people will greatly benefit, urban and rural.

Very respectfully,

Harold Nelson

BEST COPY AVAILABLE

South Dakota
Water Congress
PO Box 536 • Pierre, SD 57501 • (605) 224-7945
Judy Harrington • Executive Director

March 21, 1983

Senator Donald Nickles, Chairman
Subcommittee on Water and Power
% Senate Office Building
Washington, D.C. 20510

Dear Senator Nickles,

This is to advise you of action by the Board of the South Dakota Water Congress in support of efforts of the Belle Fourche Irrigation District through S.448 and H.B. 1282.

Our criteria for endorsement includes, among other items, that a project must have responsible local support, that it be compatible with the state water planning process as well as with SDWC policies, and that it have significant benefit for the state.

Our board feels that the Belle Fourche Project meets this test. Our endorsement carries our commitment to promote and expedite a project's development, and in the case of Belle Fourche this means redevelopment or rehabilitation of the project facilities completed some 70 years ago.

The Belle Fourche project has the stature of being the oldest reclamation project in the United States. Rather than have the benefits of that project slip away because of deteriorating structures, we want those benefits continued.

The Belle Fourche sponsors seek to restore the reliability of the project facilities and improve safety features of the operation plus conserve some 20,000 acre feet of water now lost annually to seepage and reclaim lands affected by the seepage.

To afford the rehabilitation, the Belle Fourche sponsors, through S. 448 and H.B. 1282 seek to have the project integrated into the Pick-Sloan Missouri Basin Program. In field hearings of the Senate Subcommittee on Water and Power in September, 1981, the goals of this project were overwhelmingly supported by local water users, city officials and local business and the Executive Branch of S.D. state government. In February, 1982, the S.D. Legislature forwarded you HCR 1017 which supported the goals of the Belle Fourche sponsors.

Please add our voice to this effort at each future step of action in the U.S. Congress.

Sincerely,

J. Harrington

Judy Harrington, Executive Director
on behalf of the SDWC Board

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